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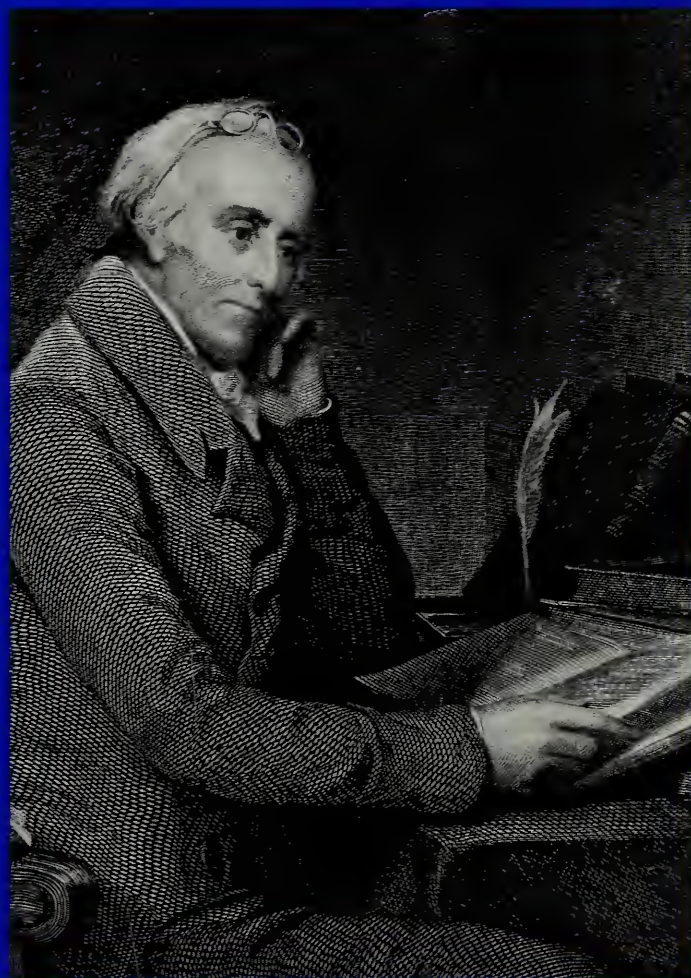
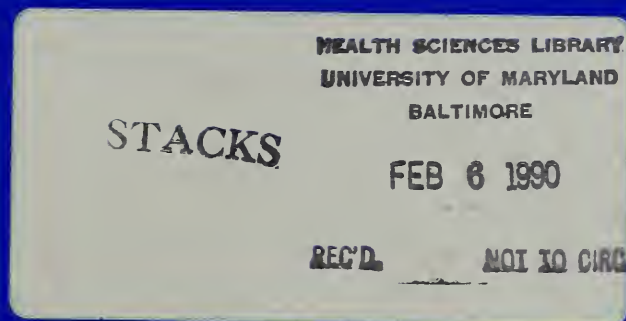
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The Journal

OF THE SOUTH CAROLINA MEDICAL ASSOCIATION



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**SPECIAL ISSUE: ALCOHOLISM AND OTHER DRUG ABUSE
THE SOUTH CAROLINA STORY**

**GUEST EDITORS: GREGORY L. PHELPS, M.D., M.P.H.,
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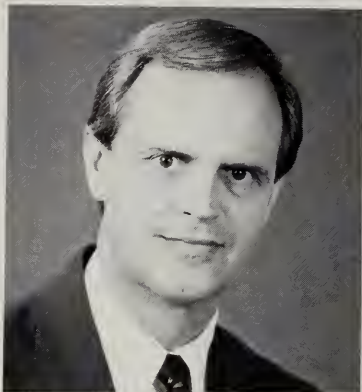
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President's Page

AMA ANNUAL MEETING HIGHLIGHTS

I have just returned from the AMA Interim Meeting. John Hawk will be giving you a full report in the next *Journal* but I would like to highlight some developments I think will interest you.

Many resolutions presented at the AMA referred to problems related to the Omnibus Budget Reconciliation Act (OBRA). One such problem, and I wrote about it in a previous President's Page, was expenditure targets (ETs). The South Carolina Medical Association and the AMA fought vigorously and successfully to defeat expenditure targets. In a tradeoff to defeat ETs, we had to accept the Medicare Volume Performance Standard (MVPS). This is supposed to measure the growth of physicians' services. The MVPS will reflect increases in payment under the payment schedule, number and age of beneficiaries, new technology and other changes which could impact on volume. The MVPS is to be established by the secretary of HHS, who is required to consult with organizations representing physicians. I can assure you the AMA and SCMA will monitor MVPS closely.

Geographic Adjustments—As you know, South Carolina has been near the bottom of the list (as compared to other states) for reimbursement even though our Medicare patients pay the same rates as patients in other states. I have written letters to our South Carolina delegation in Washington asking them to help us correct this inequity. There were several resolutions at the AMA meeting relating to this problem. The AMA House of Delegates adopted the following resolution: "RESOLVED, That the AMA continue to urge Congress to eliminate immediately Medicare physician payment differentials that do not reflect valid and demonstrable variations in physician overhead and professional liability insurance."

Physicians' Submission of Claims—OBRA 1989 will require physicians and suppliers to submit claim forms (whether or not the claim is assigned) for care provided to Medicare patients on or after September 1, 1990.

Physicians' Office Laboratories—OBRA 1989 removed the requirement that physicians' office laboratories providing a volume of 5,000 tests per year be regulated in the same manner as an independent clinical laboratory. Please note, however, that physician laboratories will be required to meet minimum federal certification standards by July 1, 1991. The SCMA will notify you of these standards as they are finalized.

Patient-Physician Reimbursement Under Medicare and MAAC—The Medicare Economic Index (MEI) which measures inflation in medical costs was expected to increase by 5.3 percent on January 1, 1990. But, of course, Congress was not able to pass a budget this year so certain automatic cuts required under the Graham-Rudman-Hollings Deficit Reduction Act will be implemented. Thus each physician service claim through March 31, 1990, instead of increasing, will be reduced by 2.09 percent. Payments for claims for services from April 1-September 30, 1990 will be reduced by 1.4 percent. This will save the government about \$535 million dollars at the expense of both physicians and patients. These reductions will partially offset the April 1 increase of 5.3 percent for primary care services and 2 percent for other services (except radiology, anesthesiology and other "overvalued services" which will receive no increase).

The MAAC has been a major problem and each year we have numerous resolutions at the AMA on this subject. It is my opinion that the MAAC is unconstitutional; but this has been tested unsuccessfully in court by the AMA in Indiana, Texas, Massachusetts, Georgia, and Arizona. One court recognized the frustrations that physicians feel about the MAAC program. It said, "Given the intricacy, intrusiveness, and constant fluctuations of these price control measures, it is no wonder that top students are being deterred in droves from applying to medical schools." In spite of its criticism, the Court of Appeals did not find the MAAC program to be unconstitutional. We have spent enough money in the courts fighting MAAC. The only way to get rid of MAAC is to have Congress repeal it. At SCMA's request, Butler Derrick has sponsored legislation to accomplish this elimination. The SCMA and AMA will continue to work with Congress on MAAC and other unfair Medicare reimbursement policies.

As you can see, we have many battles to fight in medicine and the SCMA and the AMA will continue to fight them for you.

DANIEL W. BRAKE, M.D.
President

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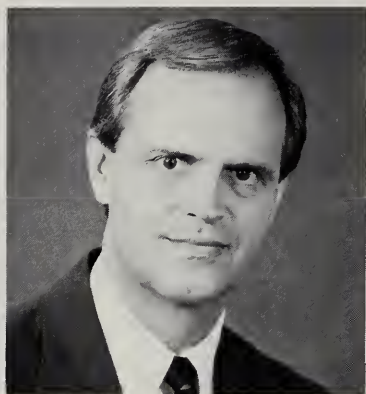
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President's Page

A POSSIBLE SOLUTION FOR THE UNINSURED AND INADEQUATELY INSURED

At our last Healthcare 2000 meeting we discussed the cost shifting that results from providing health care for the approximately 37 million uninsured and inadequately insured people in this country. As you know Congress will be studying proposed legislation which would require employers to provide health insurance for all full time employees. We have heard the argument that requiring insurance coverage for employees would force many small companies out of business.

Whose responsibility is it to provide health insurance for these 37 million people? I believe that those who have the ability should provide for themselves and let the government provide for those that are financially unable to care for themselves. This also applies to health insurance. I do not believe it is the employers' responsibility to provide health care for their employees. It is equally unfair to the employers that do provide health insurance to have to pay through cost shifting for the 37 million uninsured and inadequately insured. But that is exactly what is happening.

In this country we provide medical care for all Americans regardless of their ability to pay. When an uninsured patient is admitted into the hospital, the hospital has to shift the cost to the patients with the ability to pay. I can certainly understand why the employers that provide insurance for their employees resent having to pay the health costs for those 37 million uninsured individuals. Does that mean that the employers that are not "paying their fair share" should be required by law to provide health insurance to their employees? I think the answer lies in everyone providing for himself and the government providing for those that are financially unable to buy health insurance.

To offset the tremendous cost shift from Medicare, Medicaid, the uninsured and inadequately insured to the remaining approximately 35 percent of the population, I believe everyone should be required by law to have an affordable basic health insurance policy. That insurance policy should pay a full dollar for a full dollar of service. That means requiring the 37 million uninsured and inadequately insured to purchase or to acquire insurance. Now who should pay for that policy? If we require the patient to buy the policy he would be paying for it with after tax dollars and those people who are at or just above minimum wage could not afford the insurance premiums. If we require the employers to provide health insurance a number of small businesses could not afford the premiums.

It is important that the current purchasers of health insurance recognize that with this large group of people not paying anything for their health services, and with Medicare and Medicaid paying far below costs in many cases, the result is a tremendous cost shift to the 35 percent who are paying for the high quality health care everyone is receiving. It really becomes ludicrous when you realize that the workers without health insurance are paying income taxes and social security to subsidize health care for others.

There are no easy solutions to this problem but it is something we need to start explaining to leaders in our communities whenever we have a chance so that awareness will develop and changes will be made.

A handwritten signature in dark ink, appearing to read "D. W. Brake M.D.", written in a cursive style.

DANIEL W. BRAKE, M.D.
President



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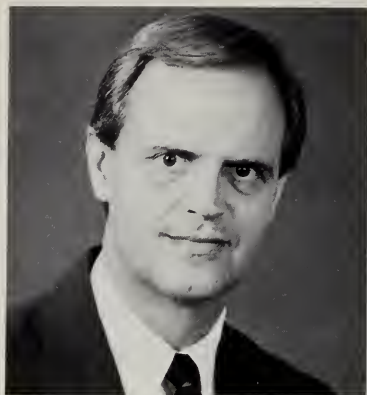
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President's Page

THANK YOU, SCMA MEMBERS

I am a family physician in active practice. In the last five to ten years I have found that each year brings more rules and regulations that interfere with my practice. There has been a tremendous increase in paperwork and harassment of my staff by government and insurance companies. These new rules and regulations from government and insurance companies have also interfered with my relationship with my patients and frequently threaten the quality of medicine I provide. Some examples of these problems are as follows:

(1) Incompetent Utilization Review Companies: While I'm trying to see patients in my office, I receive a call from a "person" working for a UR company from out of state. They ask me a number of questions which include (1) Why did I admit Ms. Jones? My answer: Ms. Jones had a myocardial infarction; (2) Well doctor, what did the EKG show? Answer: Myocardial infarction; (3) What did the enzymes show? (4) What is your plan of treatment? (5) What are you doing for the patient in the hospital that you can't do as an outpatient, etc.? Obviously, it is now a waste of my time to explain to someone with little or no medical training, the diagnosis and treatment of acute myocardial infarction. This disrupts my office and is basically a waste of my time.

(2) Recently I received a letter from the medical licensing board notifying me that the law prohibits me from giving drug samples out of my office to indigent patients without labeling the samples. Why should someone want to make it difficult for me to give a week's supply of antibiotics to an indigent patient who couldn't get treatment otherwise? This interferes with my ability to help my patients.

(3) Medicare sent out a notification that when a doctor takes calls for another physician he must bill the patient rather than allowing the patient's personal physician to do the billing. I have a friend in solo practice. The only way he can get any rest is for my practice to cover for him. When we make rounds on his patients over the weekend, we do not bill the doctor or the patients; but my friend who has all the patient information bills the patient. This saves the patient from getting a bill from two doctors. It saves the intermediary from getting two bills on the same patient. Why is Medicare interfering with my ability to take calls for a friend?

I am writing this to you, SCMA members, to thank you for joining the SCMA. Because of your membership and the dues you pay, you have helped form an effective organization to speak for all physicians. Some examples of your accomplishments through the SCMA which have helped me with my problems are:

(1) The SCMA introduced a utilization review bill last year which passed the first week in the 1990 session and became law January 31, 1990. This bill requires that the over 200 out-of-state review agencies register with the insurance commissioner and meet standards developed by the commission. If they do not meet these standards, the insurance commissioner can suspend their operating certificate thus giving some control over the utilization review we have to deal with in our office.

(2) Within weeks after receiving a letter from the State Board of Medical Examiners and the first day of the opening session, the SCMA introduced a bill to exempt non-controlled drugs from state labeling requirements when dispensed at no charge to the patient. Again, your organization is helping me in my office.

(3) When the SCMA heard about the Medicare requirement for physicians taking calls for another physician, we were able to get the South Carolina Medicare intermediary to put a moratorium on this until a bill which has been introduced by the AMA to repeal this law is decided.

There are many other problems affecting the way I practice medicine which the SCMA has solved for me. Without you, the SCMA member, none of this would be possible and I would be a lone, powerless voice. It is difficult for me to understand why there are so many physicians who are not members of the SCMA or AMA. Now more than ever before we need a strong voice to speak for medicine. Let's talk to our friends who are not paying their fair share; but thanks to you SCMA'ers for being there when I needed you.

DANIEL W. BRAKE, M.D.
President

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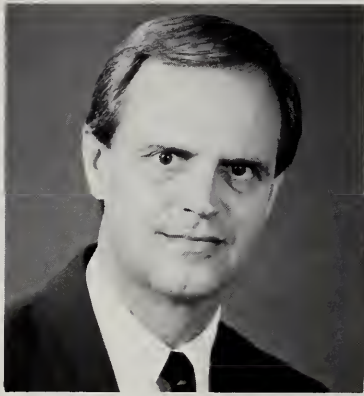
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IN CONCLUSION

For the past year I have been filling the President's Page with my thoughts. This month is my last President's Page. Your newly installed President, Dr. John Simmons, will take over next month.

I have enjoyed the freedom to share my thoughts with you this year. I have appreciated the kind comments I have received from you about the President's Page. Since some of you will not be at the Annual Meeting, I would like to take this last opportunity to thank you for the kindness you have shown me at county medical society meetings I was able to visit. I have thoroughly enjoyed meeting with you. I have renewed old friendships and made new friends.

I would like to thank all of you that have served on the SCMA committees this year. We realize how busy you are and appreciate the time you donate to the SCMA. Our committee function is a vital part of the SCMA's success. The members of Health Care 2000 have my gratitude for their hard work this year. I hope all of you will read Health Care 2000 and work for implementation of its recommendations.

Thanks to the members of the Board of Trustees for their support this year. Your board members spend many hours working on your behalf. My sincere appreciation goes to Barbara Whittaker, our Associate Executive Vice President, and the staff for all of their help this year. They have responded rapidly and efficiently to my requests for updates on legislative matters and other issues. They have helped me prepare when testifying before committees and other meetings, and their assistance has been invaluable. The South Carolina Medical Association has a first class staff and I am proud of them. Bill Mahon, our Executive Vice President, and I have worked closely for the past four years, the two years while I was serving as Chairman of the Board, one year as President-elect and now as President. I have grown to respect him tremendously as a man of many talents and, fortunately for us, those talents and energies are directed for the benefit of the SCMA. Thanks to Bill for driving me all over the state this year and his help over the past four years.

Finally, to my wife Sue, a great big thanks for putting up with me this year.

As I turn the presidency over to John Simmons at our Annual Meeting, I pledge my support to him and know he will serve us well. I would like to thank all our members for their support this year. Serving as your president has been an honor I will always treasure. I hope to see you at our Annual Meeting later this month.

DANIEL W. BRAKE, M.D.
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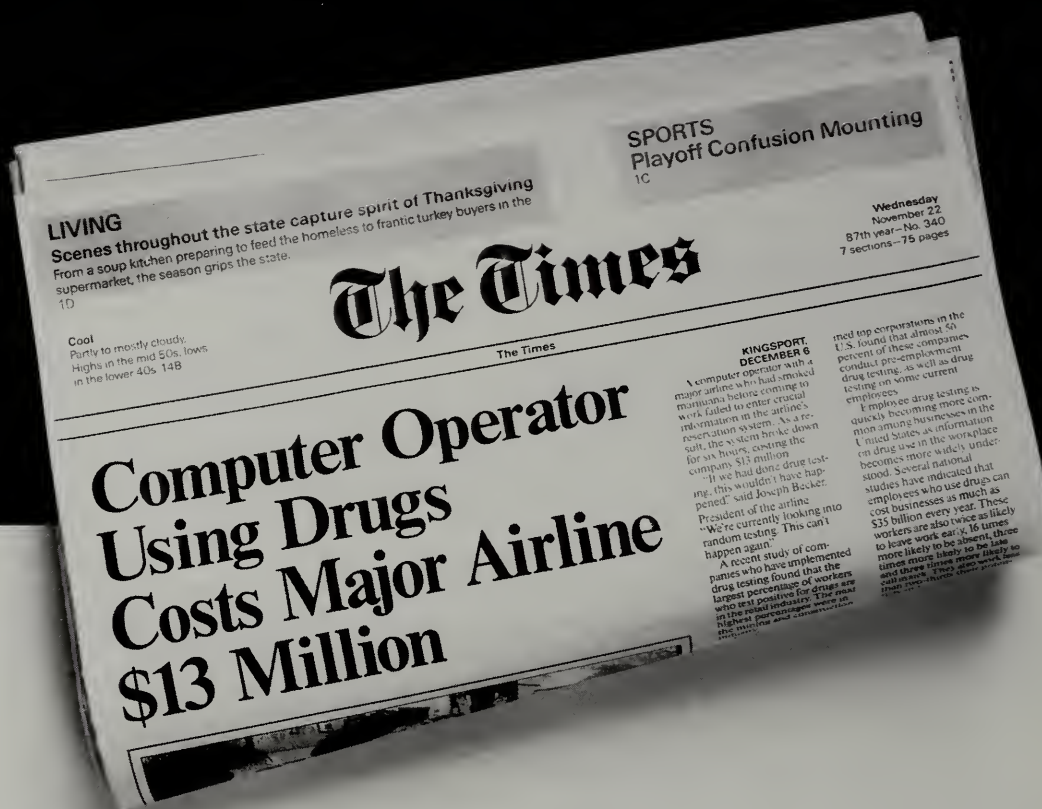
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President's Page

MY YEAR


While there has been one President's Page provided by me which appeared in the May issue, this is the first one I have actually prepared since the annual meeting and I need to begin with a note of appreciation for several things done for me during the past several weeks. Obviously, at the annual meeting when one is installed as President this is a highlight event in one's career, and I am most honored. Many expressions of congratulations were directed toward me and I have tried and will continue to try to respond individually. I am most appreciative. As a way of beginning I am going to list several items we initiated during our annual meeting. It may sound like it is rambling, however, at the start of the year we have a number of areas of concern.

In coordination with the auxiliary, Betsy Terry, the auxiliary President, and I have agreed to jointly address the problem of substance abuse in South Carolina. We probably will be utilizing the AMA-ABA joint project and we hope to have that underway soon. It will take a great deal of planning and will not likely be completed in one year; however, we would like very much to get this project started. While in Charleston, Patsy and I had the opportunity, along with others, to have dinner with Dr. and Mrs. Alan Nelson. I have subsequently received a note from Dr. Nelson congratulating me and encouraging our participation in this project.

Secondly, I want to address a resolution adopted at our annual meeting related to physician participation in Medicaid. The resolution recommended that each physician carry a caseload of 25 or accept two Medicaid patients per month, and further that the SCMA request each county medical society to implement a local system such as an equitable rotation plan which would assist Medicaid patients in obtaining medical care. I am sensitive to this issue and feel that Medicaid patients simply must not meet resistance to access to care in the South Carolina healthcare system. I realize it has long been felt that the compensation was inordinately low and the paper work was inordinately high; however, these problems have been resolved and with adequate compensation I feel that our medical association must support increased access for these persons.

Last, but not least, I want to address an issue in the Health Care 2000 Report. One recommendation in Health Care 2000 was that the state levy an appropriate tax on tobacco products and alcohol to fund the treatment of disease and injuries resulting from the voluntary use of these products. As a response to the adoption of this recommendation, the medical association has prepared legislation for addressing tobacco injuries. This will amount to having a 50 cents per pack tax on cigarettes to create a fund from which refunds for tobacco related illnesses would be made to those who are purchasing health care insurance. We know there are some half million smokers in South Carolina. The average yearly health care cost per person for smoking related illness in South Carolina is \$600.00, with a statewide total cost of some \$307 million. While there are many policy issues related to health care and health care costs which must and will be addressed, a specific item which can give some early results in the cost escalation will be to address the problem of smoking. As you hear more about this and when the legislation is introduced in the coming year, we will be dependent upon your help in getting a law passed.

Finally, let me say once again how honored I am to serve as your President this year. I have other concerns which I will be sharing with you, many coming from the Health Care 2000 Report and the outstanding work done by Dr. Brake and that committee during this past year. I have asked Dr. Brake to serve as Chairman of the Implementation Committee for Health Care 2000. We are also appointing a committee on preservation and protection of the environment. I welcome and request your input during the coming year and trust that it will be a good one.


JOHN W. SIMMONS, M.D.
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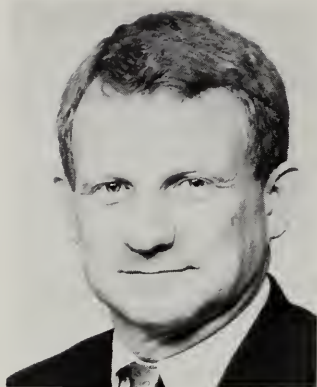
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President's Page

BASIC BENEFITS

I would like to begin a discussion in this month's President's Page on the subject of basic benefit plans. We are hearing more and more of this term and it may be our next buzz word as we look at and discuss issues related to health care delivery in the '90s.

Several years ago the concept was addressed in a massive project of the AMA with the resultant title of Health Policy Agenda. Over the past two years we heard of a project in Oregon to prioritize health care services so that all persons would have an increased chance of basic services. Over the past year Dr. Brake's Health Care 2000 Committee studied and recommended that (1) a basic health benefit level be determined, and (2) that every citizen of South Carolina be covered for that benefit. Most recently the AMA is promoting a program entitled Healthcare America. The report addresses the need for major Medicaid reform to provide *uniform adequate benefits* to all persons below the poverty level. It goes on to discuss *basic coverage* for all working uninsured.

If I asked you today or if you asked me, "What is a basic health benefit plan?", we would have difficulty with the definition. Indeed, all bodies now discussing and trying to define the term are having difficulty. I will try to be more specific in future articles about the emerging details of such plans.

Some related and very difficult questions are as follows:

What is done with a request for care that falls outside a basic benefit level?

How is a system that provides basic care for all to be financed?

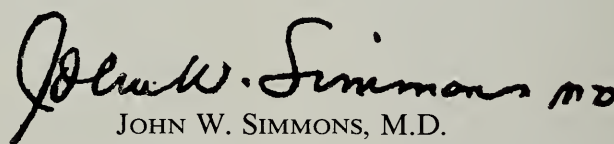
Again, the answers, both ethical and financial, are difficult and elusive.

In regard to funding, such measures as Medicare and Medicaid reform have been recommended. A mandatory insurance requirement for all employers has been recommended. Risk pools and public and private partnerships have been recommended. Last, but more worrisome, is a national health program perhaps using the Canadian model. Again, I will try to provide some specifics in future columns.

On the ethical problems related to requested care over and above the basic level, several solutions have been proposed. They include priorities, parameters and guidelines and rationing.

I refer to you to Dr. Robert Veatch of The Kennedy Center for Medical Ethics at Georgetown. Dr. Veatch acknowledges that rationing may be the answer, but pleads for society, not the medical community, to set the standards and priorities for rationing. He says that clinicians should not be asked to be society's cost containment agents.

Again, I will try to provide more details in future articles if and as they are available.


JOHN W. SIMMONS, M.D.
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President's Page

WHERE WE ARE HEADED

Last month I enjoyed and worked with the SCMA delegation at the AMA annual meeting in Chicago. Your delegation chairman, Dr. John Hawk, has reported on the activities and resolutions of the meeting, but I want to highlight two subjects frequently discussed.

Beginning at the Organization for State Medical Association Presidents meeting, the Healthcare 2000 report developed by the SCMA was presented by Dan Brake and enthusiastically received and discussed until the end of the meeting. Up through the last day other states were requesting copies of the Healthcare 2000 report.

Several other states are looking at healthcare reform and have plans with some features of Healthcare 2000. They include Texas, California, New York and others. Some of us from South Carolina and the other interested states discussed getting together to pursue the programs perhaps jointly. I will keep you posted.

The second subject receiving a lot of attention was the AMA Health Access America program. This is not necessarily a new approach though there are new features, but there is certainly a new emphasis being given to some solution to the problems of access, affordability and accountability. The fundamental principles upon which the program is built are:

1. Improvements to the American healthcare system should preserve the strengths of our current system.
2. Affordable coverage for appropriate health care should be available to all Americans regardless of income.
3. Particular efforts are needed to assure continued access by the elderly to affordable healthcare services.
4. Healthcare services should be delivered with high quality at appropriate cost.
5. Patients should be free to choose from whom and the manner in which healthcare benefits are delivered.
6. All physicians should be committed to the highest ethical standards in the delivery of care to patients.

On these fundamentals of strength, access, freedom, affordability, security and quality, a program is being built to address the problems facing the delivery system today. You will see much information and hear much discussion in the future. It matches well with features in Healthcare 2000. I will try to get you more information from the AMA. I believe it is a plan to be well received by other parties, i.e., payors, government, advocacy groups, etc., and one with real promise.

Until next month, keep cool.


JOHN W. SIMMONS, M.D.
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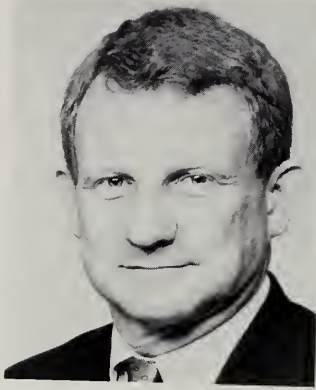
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President's Page

OPPORTUNITIES

In my inaugural address, I indicated to you that we have an opportunity at the beginning of this last decade of the century to participate in upgrading and changing the healthcare system in a way that addresses the problems of accessibility, accountability and affordability. This opportunity is exciting to me.

We are now faced with an additional opportunity perhaps even more exciting. This opportunity is to have one of our own members elected to the AMA Board of Trustees.

In my first year on the SCMA Council (now Board of Trustees), Randy Smoak was chairman. Along with you I have enjoyed watching as he demonstrated his leadership as chairman of council, president-elect, president, SOCPAC chairman, AMPAC chairman and AMA delegate. He has held numerous other positions and led in an exemplary fashion. He has been a role model for all of us. He is already an admired and respected figure on the national level as an AMA delegate and AMPAC chairman.

Through all of these activities, Randy has been a servant leader, and his concerns have been for patients, physicians and the public more than self.

Randy will be a candidate for an AMA Board of Trustees seat at the AMA annual meeting in June of 1991. On his behalf we need a lot of support; support in the form of contacts and funds. At its founding the AMA met in Charleston and its early history was in large part stimulated by the South Carolina medical community. But it has been 30 years since the last South Carolinian, Dr. Julian Price, served on the AMA board.

Please join with me in welcoming this opportunity and plan to help successfully take advantage of it. Our pride in success will be much more than Randy's. Our reward and the AMA's reward will make any effort it takes worthwhile.

Randy understands our opportunity and obligation to participate in the discussions related to accessibility, affordability and accountability in the healthcare system. Let's all take advantage of that opportunity by supporting Randy's campaign with a \$50.00 contribution. Send your check to SCMA Headquarters today!

JOHN W. SIMMONS, M.D.
President

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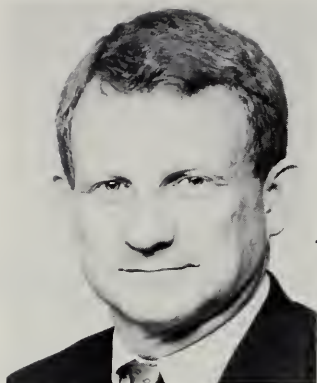
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President's Page

MORE OPPORTUNITIES

It seems impossible that I am already writing my sixth president's page. Time flies.

I want to share with you another opportunity. This arises out of a major problem we have in South Carolina. We are not the only state with the problem. Indeed, the program I will describe was developed by the American Medical Association jointly with the American Bar Association for a nationwide effort.

Let me mention a couple of aspects of the problem in South Carolina. We drink more beer in South Carolina than milk. Problems related to cocaine in the newborn are rising rapidly. We could all think of many other examples of problems associated with alcohol and drug abuse.

The program I am describing is one in which a physician and an attorney would go as a team to make a presentation at the junior high school level in order to help children at that level understand some of the medical and legal problems associated with substance abuse.

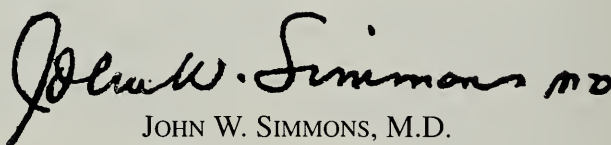
The project to accomplish this statewide in South Carolina is jointly sponsored by SCMA, the SCMA Auxiliary, the South Carolina Bar Association and the South Carolina Association of Medical Assistants. Your county society should contact you this fall and ask you to volunteer as a team member. The bar association will identify the lawyer members of the team. The auxiliary and medical assistants will work on the scheduling and coordination with the schools.

Materials will be available from the medical association and the bar association to assist in preparation of the presentation.

If you do not hear about this program from your local society, please call your president or the SCMA office. I strongly encourage you to participate. The problem is real and the opportunity is great. We must take advantage of every chance to prevent or remove this malignancy from our society. We are attempting a program aimed at people at a most vulnerable age. The time and effort required on a physician's part will be minimal.

Certainly there are many great issues facing medicine today. While issues related to access, affordability and accountability are difficult, we cannot ignore the sociomedical issues of the 90s. Please join me in this program.

Thank you.


JOHN W. SIMMONS, M.D.
President

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President's Page

IS IT ALL BAD?

All the discussion about the U.S. healthcare system today suggests that there is little good to be found in an analysis of the system. We are told that the costs are too high, or too many have limited or no access, or that quality problems bring into question the services which can be afforded or provided.

In the current issue of *Health Management Quarterly*, two articles are of interest in this regard. In one, "To Save and to Let Go," Emily Freidman, a health policy analyst, suggests that all is not bad. She writes that there are three characteristics to help identify what is worth saving. They are structure, service and spirit.

In looking at the structure of the system, Freidman says that "pluralism, even if it sometimes seems skin close to chaos, is probably the system's greatest strength." Our system has broad choices of hospitals, physicians, and noninstitutional providers.

An evaluation of the service aspect of our system reveals the twin positives which, according to Freidman, are "convenience and ready availability of even tertiary care for most patients." She goes on to say that a third area of service in which the world looks to the United States is quality assurance. And "perhaps the greatest aspect of service is the continuing tradition, however tattered, of voluntary care for the poor."

Finally, in looking at the spirit of our healthcare system Freidman suggests that our spirit is introspective and that "the American healthcare providers do think about why they are here even if the answer is equivocal. Physicians, despite insistence on autonomy and collegiality, do worry about the quality of care they and their colleagues render and sometimes take extraordinary risks to protect and advocate for patients. Hospital administrators worry about the balance between margin and mission. Trustees who as voluntary stewards represent the heart and soul of the system examine the morality of their organization on an ongoing basis."

In the second article, Dr. Eli Ginzberg, Ph.D., Director of Conservation of Human Resources at Columbia University, says that the "U.S. healthcare system must be meeting society goals otherwise we wouldn't be pumping so much money into it." He says "the United States spends vast amounts of money on medical care because the key decision centers in our society—those who have the power to influence the rate of spending—favor greater not reduced outlays." These decision centers and their respective shares of the nation's total healthcare expenditures are the federal government at 30%, the state government at 14%, corporate sector at 26%, and household at 30%, without denying that part of what we spend goes for services of dubious or no benefit (some may even be harmful to those treated). This proposition states that on balance public citizens not only are getting what they want but in fact have repeatedly indicated on opinion surveys they favor even more medical care.

As we continue to analyze our system and devise mechanisms to deal with its deficiencies, I think it is important that we preserve what is good about our system. Clearly we have the means to deal with most of the illnesses that patients come to the system with. Hopefully research will continue to be funded to deal with those problems for which we have not as yet found cures. We must continue the service that has been provided to all classes of people and bring any who are disenfranchised into the system. Our spirit of introspection in quality assurance must continue. We must be responsive to those we serve; and if they're comfortable with ever-increasing expenditures, then reshaping the system to decrease expenditures as Medicare now seems to be doing makes little or no sense. I think we all would favor eliminating the waste that's in the system. I think that organized medicine would suggest that most of that waste does not occur in the relationship between the provider and these patients but at the administrative level or oversight level.

I trust that these few lines will stimulate your thoughts and response. I would welcome hearing from you.

JOHN W. SIMMONS, M.D.
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President's Page

SEASON'S GREETINGS

No doubt, by the time you read this you will be well into the holiday season. So will I. Patsy and I are already looking forward to our boys being home. Since the youngest went to college this year, things have been different. Both of us have been busy—me with the activities as SCMA president, and Patsy with the parenting workshop she does.

There will be much more activity during the holidays but it will be more personal. One wonders why we tend to confine the personal, pleasant, giving atmosphere of the holiday season to such a few short days. I know we really have some of the same feelings year round, but we celebrate them only for a few days.

The event causing this celebration, the birth of Christ, only gets attention because of His life, not His birth. He spent His life in ministry and healing. He challenged us with such things as "... when you have done it unto one of the least of these...."

He challenged all of us to a life and ministry of caring and healing. Where more than in medicine is this challenge more appropriate? Our response must be year-long and life-long, not just during a brief annual celebration. This annual event can become a renewal. You can be assured that my family and I will be sharing all the fun and happiness to be had, as I am sure you and yours will also. Please take time to remember those physicians who are serving on active duty and their families.

For you and yours I wish the best of the season and a lifetime of shared health and happiness.

A handwritten signature in dark ink that reads "John W. Simmons MD". The signature is fluid and cursive, with the "MD" at the end being more distinct.

JOHN W. SIMMONS, M.D.
President

The Journal



OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 86

JANUARY 1990

NUMBER 1

Special Issue: **ALCOHOLISM AND OTHER DRUG ABUSE
THE SOUTH CAROLINA STORY**

Guest Editors: **GREGORY L. PHELPS, M.D., M.P.H.
N. PETER JOHNSON, Ph.D.**

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SPECIAL ISSUE: ALCOHOLISM AND OTHER DRUG ABUSE THE SOUTH CAROLINA STORY

INTRODUCTION

GREGORY L. PHELPS, M.D., M.P.H.*
N. PETER JOHNSON, Ph.D.**

In 1987, the Health and Human Services Finance Committee conducted a survey in South Carolina to find "the most serious human service problem in the state of South Carolina." Alcohol abuse came in by far as the number one problem. It came in ahead of unemployment, teen pregnancy or even drug abuse. With 3,252 casualties in 1987, it was a leading cause of death in South Carolina, surpassed only by tobacco with 8,034.¹ By contrast, only 90 people died of AIDS and 75 of other drugs. According to Dr. Jerry McCord, Director of the South Carolina Commission on Alcohol and Drug Abuse, "Alcohol is still overwhelmingly the drug of choice in South Carolina."

The roots of this special issue then grew out of a survey of South Carolina's Family Physicians. The survey was funded by the South Carolina Academy of Family Practice and the South Carolina Commission on Alcohol and Drug Abuse, and the survey determined South Carolina's primary care physicians' attitudes about alcohol abuse and modes of treatment. Questionnaires were mailed out to all 971 members: student, resident and practicing physicians comprising the SCAFP. Three hundred ninety-one replies were obtained. In the fall of 1988, the members of the SCMA's Physicians Advocacy and Assistance Committee voted to proceed with a special issue on alcoholism.

It quickly became clear that South Carolina's Family Practitioners (and by implication

most primary care givers) were uncomfortable dealing with alcoholics and they didn't think their medical peers did much better. Over 80% of physicians surveyed recommended AA as their first or second choice of treatment. By contrast, only 17% referred to a psychiatrist as a first or second choice. And their last choice (about 10%) was to treat the patient themselves.

This is important because alcoholism is an "invisible plague," rarely detected by physicians until the final and most refractory stages of the disease. This invisible plague includes a prevalence of alcoholic patients in medical care that includes:

15-20% of primary care office visits;²

25-30% of acute care hospitalizations;³

40% of ER visits (including more than half of fatal accidents);⁴ and

15-30% of nursing home patients.⁵

Fully one in three families report that drinking had caused trouble in their home.⁶

Progress in the mainstream of medicine seems to have been glacially slow. In 1786, Dr. Benjamin Rush (see cover) wrote a treatise on alcoholism as a medical illness, *An Inquiry into the Effects of Ardent Spirits upon the Human Body and Mind*. It was 171 years later when the AMA in 1957 accepted alcoholism as a medical illness.⁸ In 1987, drug addiction was accepted as a medical illness,⁹ and in 1988 the AMA accepted the American Medical Society on Alcoholism and Other Drug Dependencies into the AMA House of Delegates as a specialty organization.¹⁰

This slowness in the development of a medical attitude towards addictions is reflected in the fact that 65% of respondents including 50% of residency graduates felt they were lacking in adequate education about alcoholism. Resi-

* Medical Director, Chester County Commission on Alcohol and Drug Abuse, Route 1, Box 144, Richburg, S. C. 29729.

** Coordinator, Office of Alcohol and Drug Studies, Department of Neuropsychiatry and Behavioral Science, USC School of Medicine, Columbia, S. C. 29208.

dents correctly perceived that approximately 30% of their hospitalized patients were suffering from alcoholism, but the directors of the residency programs put the number at only six percent.

Alcoholism is a disease half again more prevalent than diabetes,¹¹ yet over 50% of Family Physicians listed "zero to four hours" CME in this subject in the last three years. A review of these Family Physicians' usage of the new commitment law for substance abuse shows almost 60% have never committed anyone while a core group of nine percent have committed six or more patients for substance abuse. Only one-third of the physicians were familiar with the concept of intervention in substance abuse and another third believe that it is safe and appropriate to furnish recovering alcoholics with benzodiazapine prescriptions for anxiety.

Treatment of alcoholism and other dependencies is slowly entering the mainstream of medical practice. More and more evidence is amassing to show that alcoholism is a metabolic and genetic disorder instead of a moral failing which a few years ago 75% of physicians felt it was.¹¹ Our survey showed 65% of physicians surveyed now feel it is a metabolic/genetic illness.

Primary care physicians remain the bulwark for treatment and even more importantly the initial diagnosis of alcoholism and other drug abuse. It is hoped this special issue of *The Journal* will serve as a handy reference for South Carolina physicians. □

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*The guest editors express
their appreciation to the
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contributions permitted
publication of this expanded
issue of The Journal.*

Amethyst

Brierwood Hospital

Hazel Pittman Center

Lifeplus

S.C. Commission on Alcohol
and Drug Abuse

WHO HEALS THE HEALER? THE HISTORY AND PURPOSE OF THE PHYSICIANS ASSISTANCE AND ADVOCACY COMMITTEE

HUGH V. COLEMAN, M.D.*

It has not been many years since the distinction between "bad" doctors/"sick" doctors began to have some relevance in the medical community of South Carolina. In the past, impairment of a physician's skills and professional judgment brought on by alcohol or drugs was considered a moral or ethical failing for which condemnation and punishment were the only solutions. Recognition of addiction as a disease, early intervention, and appropriate treatment have supplanted the punitive aspect in dealing with doctors who have difficulties in medical practice and in daily living resulting from substance abuse, as well as those physicians who have become impaired through other disease states and the natural aging process. Some of the factors that have been important in the changes in attitude toward impaired physicians and the strides that have been made in the rehabilitation and return to active practice of such individuals are described in this communication.

In 1975, in the lower part of South Carolina, a group of physicians headed by a recovering alcoholic doctor began meeting for the purpose of common support and to aid each other in recovering from the ravages of addiction. In the South Carolina Medical Association, there was a Committee on Alcohol and Drug Abuse which had little viability and was not involved with physician impairment or with the physician support group. The doctor who was the motivating force for the group in the coastal area of the state died and other physicians attempted to keep the group going. There was little publicity and the existence of the group was known of by very few doctors in the state. A need for a more organized effort was evident though some success in recognition, treatment

and rehabilitation of "sick" doctors was achieved.

About 1980, a physician who was brought before the South Carolina Board of Medical Examiners to answer charges of impairment of his practice due to the use of mood altering substances was asked what the medical association was doing to aid such people as he and the answer was "very little." A dedicated layman, very active in Alcoholics Anonymous, became interested in the plight of impaired physicians and gathered together a number of recovering alcoholic doctors and other doctors who were interested in the problem to establish a structured program for the discovery of and help for doctors who were "sick" from alcohol and drug abuse. The South Carolina Medical Association and its officers were quickly convinced of the need for organized medicine in the state to be involved. The State Board of Medical Examiners also determined that after-care and monitoring of physicians recovering from alcohol and drug abuse were needed. The medical association added "and Impaired Physicians" to the title of The Committee on Alcohol and Drug Abuse and developed additional charges for the committee. The committee began to assist with the discovery, intervention upon, and rehabilitation of physicians of South Carolina who were performing at less than optimum levels due to impairment in 1980. The members of the committee were appointed from among physicians in the state interested in the problem. The committee has as members both recovering alcoholic physicians and physicians who are not alcoholics. Most specialties and geographic areas of the state are represented.

The officers of the state medical association have been helpful in the publicizing of the committee and its activities and in encouraging individual practitioners to seek help for

* Committee Chairman, P. O. Box 1070, Marion, S. C. 29571.

colleagues or themselves. Legal assistance from the state association was sought and contractual documents developed to indicate areas in which the committee would be of assistance to and advocate for the impaired doctor, and to outline the expectations of the committee as to the individual physician's responsibility for his/her recovery and accountability to the committee. Quarterly meetings were established with informal intermeeting consultations between committee members as the need arose. Activities were given impetus by the enthusiastic endorsement of the South Carolina Medical Association and its individual officers, and particularly by the Board of Trustees, *The Journal of The South Carolina Medical Association* contributed advertising space and published editorial and news articles to better inform physicians and others about the committee and its functions. The earliest members of the committee personally promoted the activities of the committee by personal appearances before county medical societies, civic groups, medical auxiliaries, and other interested groups.

Since 1980, increasing numbers of physicians with impairments have been referred to or have come to the committee on their own. Interventions, treatment and aftercare regimes have been undertaken. The majority of doctors who have contracted with the committee and adhered to the terms of such contract have been returned to the active unimpaired practice of medicine. The committee has regularly replaced retiring members with doctors who have demonstrated good recovery and who have an interest in assisting less fortunate colleagues. The committee has developed regional treatment teams in four areas of South Carolina for closer contact with individual need situations. The committee has also been influential in the promotion of the activities of Caduceus Clubs, which are self help groups for recovering professionals patterned along the lines of Alcoholics Anonymous and Narcotics Anonymous.

Initially, most of the work of the committee was carried out by individuals on a voluntary basis with some staff support from the headquarters of the South Carolina Medical Association. The South Carolina Medical Association, through its officers and Board of Trustees,

has continued to be supportive of the rehabilitative efforts of the committee both by endorsement publicly and financial support. Though most of the functions of the committee are still carried out by dedicated physicians on a voluntary basis, the state association has in recent years provided financial support for committee members to attend educational conferences and meetings, carry out promotional activity, and to obtain reliable help in the monitoring of individuals under contract by random urine drug testing. For the past two years, the committee has been a budgeted body supported by the Board of Trustees of The South Carolina Medical Association.

In 1988, The Alcohol, Drug Abuse, and Impaired Physicians Committee petitioned and received approval from the South Carolina Medical Association Board of Trustees to change its name to The Physicians Assistance and Advocacy Committee (PHAAC) to be more in keeping with the mission and thrust of the organization. It was also the opinion of the committee that the term "impaired" might have legal implications.

Since the committee's inception, officers and other members have attended state, regional and national conferences dealing with impaired professionals from which they have acquired new methodology and educational materials to aid in state efforts. Contacts with other state and national organizations dealing with similar problems have been established and cultivated with some loose networking, and sharing of information with other states has been started. Exchange of help and information with other states' impaired professionals committees has been unselfish and ongoing whenever requested.

The PHAAC has maintained liason with the State Board of Medical Examiners of South Carolina and members have appeared before that board in support of recovering doctors who have had their licenses restricted or revoked because of problems related to substance abuse or other reasons for their being under contract to the PHAAC. It has been the policy of the PHAAC to meet with the Board of Examiners regularly to keep the board informed of the committee activity and to volunteer assistance to the board in monitoring physicians. The PHAAC has the responsibility

to advocate for physicians under contract who have demonstrated good faith and diligence in the recovery program.

At the request of the Members' Insurance Trust of the South Carolina Medical Association, the PHAAC has developed criteria designed to indicate the components of a satisfactory treatment facility for alcohol or drug impaired doctors. These suggested criteria have been supplied to the MIT and are available to any treatment facility which wishes to engage in treating alcohol or drug impaired professionals. Through some efforts of the PHAAC and with the cooperation of the South Carolina Medical Association and its Board of Trustees, the health insurance program of the members of the state association provides some coverage for the treatment of alcohol and drug addiction. The coverage has been a great help to some impaired professionals in that such doctors are frequently into financial difficulties before getting into beginning recovery.

In the past two years the Auxiliary of the South Carolina Medical Association has initiated the formation of a group for the support of spouses and dependents of impaired physicians. Organizational meetings and plans for the training of Auxilians are under way. Such support will be of great help to the "forgotten families" of impaired physicians. The PHAAC had lent its support and will continue to assist in any way possible.

One of the most encouraging developments of recent years, indicating a recognition of the impairment problem among doctors and other professionals, is the initiation of additional hours in medical education devoted to the early recognition and therapy of alcoholism and drug dependence. Concurrently, committees have been developed for the impaired medical student, intern, and resident at state medical schools. These programs have been encouraged by the PHAAC and student members of the committees have been invited to participate in PHAAC meetings. Hopefully such programs will be started in hospitals with house staffs that are not closely affiliated with the medical schools.

Dozens of South Carolina physicians have been identified as having various degrees of impairment and have been referred for treatment and followed through aftercare by

PHAAC. The success rate has been high and the relapse rate low when a thorough and careful monitoring and support program was followed. Relapse is a prominent feature of the diseases of alcohol and drug abuse, both early and delayed, but it is markedly diminished as individuals continue in a good program of recovery with adequate support, particularly in peer groups such as Caduceus Clubs. Encouraging also is the growing willingness of local medical staffs to intervene when a colleague begins to show signs of impairment. If the intervention is followed by referral to adequate treatment and followup, many doctors get help before they "hit bottom" or get into trouble with the regulatory apparatus.

If friends, colleagues, relatives, and even employees of physicians who are impaired or who are in process of becoming impaired will realize that non-punitive, non-judgmental help is available and understand that it is a demonstration of regard and affection to insist that such a person seek help, a long step toward resolving the situation will be made. It needs to be continually stressed that addiction is a disease state and not a sign of weak moral fiber. When the stigma of alcoholism is reduced and denial can be overcome, the prognosis for return to a happy and rewarding medical practice is excellent. Information and caring associates are essential elements in the early recognition of, intervention on, and the ongoing recovery of the doctor in the throes of addiction or other impairment.

In less than ten years the South Carolina Medical Association has developed a viable and active environment for the recognition and steering into recovery of its members who have impairment of their practice because of drug abuse, alcoholism, or other reasons. There is need for further development and refinement of the process and a pressing need for continuing education on the perils and pitfalls attendant upon the use of mood altering substances. The virtual elimination of cigarette smoke from medical gatherings over the past several years attests that doctors can learn to avoid behaviors detrimental to their health and that of their patients. Perhaps with the passage of time and more extensive investigation, those physicians or indeed any individuals who are at greater risk for the develop-

ment of alcohol or drug dependency may be identified with more certainty, and prevention may replace treatment of these disabling disorders. The Physicians Assistance and Advocacy Committee of the South Carolina Medical Association will remain active, ready and willing to assist colleagues who have impairment whether it is from alcohol, drugs or any other conditions. □

"One of the first duties of the physician is to educate the masses not to take medicine."

—Sir William Osler

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A SECOND CHANCE*

Life was a nightmare. It was impossible to get high any more, or to stop. I needed ten to 12 injections a day, and I'd either overdose or I'd be detoxing. I had no more hope; I knew I didn't have long to live and I longed for relief. Yet I couldn't ask for help. I just had to keep on going. My addiction had bloomed slowly. Like other physicians in my situation, I titrated the drug doses carefully, using just enough to stave off withdrawal but not enough to get overtly high. But even obtaining these amounts became increasingly difficult as my tolerance grew. All of my waking thoughts centered around the ever-increasing amount of drugs I needed just to avoid the pain of withdrawal.

Since I was generally regarded by my colleagues as a hard worker and by some as overly compulsive, it was easy at first to just add more work and patients to my schedule in order to obtain the day's ration of drugs. My drugs of choice were cocaine and fentanyl and as time went on the amounts I needed to function became large by anyone's standards. Both my wife and my co-workers began to see my change in personality and physical health but it was my wife who put it all together when she found some needles in my bathroom. I swore I would quit and I did—for a time. Then I began again. This time the amounts I needed just to keep on functioning increased at an alarming rate. However, I was practicing alone and drug access was easy. As time went on I became more cautious and was very careful to cover up my trail of drug theft but my wife discovered me again. This time she had no idea what to do. After talking with some physician friends of mine, none of whom had any experience in dealing with addiction, it was decided that I needed to be in a hospital. There was an intervention and I agreed to be hospitalized, all the

time denying I had any problem at all.

After a week of observation I went back to work in the same clinic with the same drug access without any supervision, monitoring or program of recovery. How could there be any recovery if there was no disease? With this attitude and environment I quickly fell back into my old addictions. For nearly two more years I played Russian roulette with my marriage, my career and my life.

Finally the day came; the pharmacy had noticed the huge number of drug expenditures to my clinic. I was questioned and as before I denied everything. This time, however, the intervention was not kind and gentle; it was what I needed. A bed was waiting for me in the psychiatric unit; my needle tracks were photographed and my urine was tested.

My ordeal was over; I gave up and broke down. This was the start of my process of recovery. Subsequently I spent ten days in the unit detoxing followed by seven weeks in a drug and alcohol treatment facility. My return to work was not pleasant; I had to account for my previous escapades and in many cases make painful restitution. I was placed on probation and ultimately left my employment; a place where I had planned a career. Nevertheless, I continued to practice my program of recovery and today with God's help I have a strong marriage, a prosperous practice and good health.

The elements of my recovery program are a contract with the state board wherein I agree to random urine testing, contact with the Physicians Advocacy and Assistance Committee of the SCMA, and an ongoing spiritual program of recovery as outlined in the 12 steps of Alcoholics Anonymous. □

* This article was contributed anonymously by a South Carolina physician. (Editors' Note: According to a recent article, 400 physicians in the United States are lost each year due to alcohol and drug problems.)

SCREENING TESTS IDENTIFY THE PREVALENCE OF ALCOHOL USE AMONG FRESHMAN MEDICAL STUDENTS AND AMONG STUDENTS' FAMILY OF ORIGIN

N. PETER JOHNSON, Ph.D.*

PHILIP J. MICHELS, Ph.D.**

JOHN C. THOMAS, M.A.***

Drinking alcohol is associated with varied pernicious consequences.¹ Work in a high-stress occupation is one factor associated with substance abuse problems. Each year the U. S. loses 400 or more physicians to substance abuse and/or suicide and about eight percent of physicians become chronically impaired due to chemical dependency during their medical career.² While most of these physicians could be successfully treated, especially with early recognition, denial of problem severity persists.

The Michigan Alcohol Screening Test (MAST) is a quick and simple self-administered device which assesses the severity of a person's alcohol consumption (see elsewhere in this issue). Scores between five and eight points fall in the "borderline" range while the conservative cut-off score of nine or more points implies a screening diagnosis of "indicative of alcoholism."²

Family history of alcoholism is a second factor which has important implications in medical management. Adult Children of Alcoholics (ACOA) suffer from a wide array of behavioral, emotional, and psychosomatic dysfunctions.³ Further, ACOAs are more predisposed to substance abuse.

Discovering these individuals can enhance quality of care provided to them. The Children of Alcoholics Screening Test (CAST) is an expedient self-administered identification tool to

assess this aspect of health (see elsewhere in this issue).

The current study administered both screening tests to freshman medical students to assess prevalence of alcoholism among these students and within their families of origin.

METHODS

MAST and CAST data were collected from three and four groups of freshman medical students respectively at the University of South Carolina. No identifying data were obtained in order to guarantee anonymity. Students were asked to participate, while informed that lack of participation would not be held against them. All data are therefore based on self-report. Sample sizes were as follows: MAST—Class of 1988 (N=59); Class of 1989 (N=34); Class of 1990 (N=45).

CAST—Class of 1988 (N=53); Class of 1989 (N=52); Class of 1990 (N=39); Class of 1991 (N=50).

RESULTS

Of the 138 students 104 (75%) show "no" drinking problem; 25 students (18%) show "borderline" problems; nine students (6%) demonstrate "severe" personal impairment.

Of the 194 students, 47 (24%) came from families of origin where alcoholism was evident as compared to 147 students (76%) where no such history existed.

DISCUSSION

Student problem-drinkers in this sample approximate the number of heavy drinkers in the general college-age population.⁵ At least five of the nine students admitting problems with al-

* Office of Alcohol and Drug Studies, Department of Neuropsychiatry and Behavioral Sciences, USC School of Medicine, Columbia, S. C. 29208.

** Department of Family and Preventive Medicine, USC School of Medicine, Columbia, S. C. 29208.

*** Department of Education, University of South Carolina, Columbia, S. C. 29208.

cohol abuse have sought help (unpublished data).

Those who have not sought help presumably are either in a state of denial or fear of jeopardizing their medical careers which could result from the stigmatization associated with alcoholism. Most USC medical training aims at helping impaired students by recognizing their impairment, intervening, and whenever possible, educating for prevention of the disorder.

The MAST test was completed within 10 minutes and provided a convenient and reliable method of detection and education relevant to alcohol abuse. These data support more widespread use of this instrument.

Subsequent interpretative feedback to each class has allowed students to compare their drinking status and consider the impact of their ACOA background. This heightened awareness has promoted more open discussion of personal and family experiences with instructors which in turn has led to voluntary psychotherapy intervention by at least 50% of those students seriously impaired by alcoholism.

Finally, the relevance of family history to drinking and related emotional dysfunction among ACOAs in this sample proved thera-

peutic. Discussion of CAST data provided a vehicle to probe emotionally influential elements in the background of many of these students. The five-minute brevity of CAST administration and the therapeutic implication from discussion of test results justifies its utility as a diagnostic aid and intervention focus. As medical education tools, the MAST and CAST provide students with valuable insights about themselves and classmates which may have value in recognizing and providing collegial assistance. □

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"I always start around noon—
in case it gets dark early."

—*Peggy Lee boozing by the clock
in "Pete Kelly's Blues."*

(a) "Could you be persuaded to
have a drink, dear?"

(b) "Well, maybe just a tiny
triple."

—(a) *Lucille Ball offering and
(b) Beatrice Arthur accepting a
drink in "Mame."*

PWI: PRACTICING WHILE INTOXICATED ADDICTIONS AND THE STATE BOARD OF MEDICAL EXAMINERS*

J. ERNEST LATHEM, M.D.
STEPHEN S. SEELING

The State Board of Medical Examiners is the state agency mandated by law to investigate and discipline anyone who may have violated the Medical Practice Act. The fundamental purposes of the Board are (1) to protect the public and (2) to insure the continued integrity of the medical profession.

The Medical Practice Act, a part of the South Carolina Code of Laws, sets forth the investigative process and hearing procedures to be used by the Board. It also defines various types of "misconduct" for which a physician can be disciplined. Generally speaking, this "misconduct" includes illegal, unethical or incompetent acts.

A brief review of the Board's procedures is instructive: Investigations originate *after* an initial written, signed and notarized complaint has been received by the Board. This complaint may be filed by another physician, a member of the public or any organization. The complaint is investigated by one of the Board's full-time investigators. The Attorney General's office reviews the investigative findings and reports to the Board whether the complaint has merit and warrants further action. If the investigation reveals the initial complaint to be without merit, the Attorney General's office will recommend the matter be dismissed.

If a Formal Complaint is authorized, a legal document specifically describing the alleged misconduct is served upon the physician. A hearing before three members of the Medical Disciplinary Commission is then held, and the Commission members submit a full report and make a recommendation to the Board. Thereafter, a Final Order Hearing is held before the full Board and the Board renders its Final Order, constituting the final decision of the case. The Final Order contains specific find-

ings of fact, conclusions of law and a disciplinary sanction if a violation was found.

As previously stated, the Medical Practice Act defines medical "misconduct," and sets forth specific grounds for disciplinary action. Several of these grounds are applicable to physicians whose conduct or practice have been impaired by substance abuse. For example, among the grounds for discipline are a physician being "addicted to alcohol or drugs," any conviction of a crime involving drugs, any "physical or mental disability" dangerous to the public, or any "unethical or unprofessional conduct" likely to harm the public. Clearly the Board has broad jurisdiction over conduct or practice patterns which have the potential for public harm.

The Board is sometimes asked how it determines the appropriate disciplinary sanction in any particular case. The Medical Practice Act gives the Board a broad array of disciplinary options once a physician has been found in violation of the Medical Practice Act. These options include a private or public reprimand, probation with practice restrictions or conditions, suspension, monetary fine or revocation. The determination of an appropriate sanction is often a very complex and difficult decision. There is no easy formula to be used in making this decision. The Board's disciplinary sanction reflects the particular facts and circumstances of each individual case. Each sanction decision is based on the unique facts and circumstances of that case. Easy generalizations regarding types of sanctions are not generally appropriate. There are, however, certain factors which can be identified as relevant to the sanction decision. These may include extent, severity and probability of public harm, degree to which the physician has demonstrated a commitment to altering his inappropriate practice patterns or conduct, a

* From the State Board of Medical Examiners of South Carolina, 1220 Pickens Street, Columbia, S. C. 29201.

physician's candor with the Board, and whether the physician has ever previously been disciplined. In all cases the sanction is designed to protect the public and, wherever possible, constructively assist the physician to return to the mainstream of practice.

In the specific area of substance abuse and impairment, the Board has been required to take a considerable number of disciplinary actions. In the last four years, the Board has taken approximately 25 actions involving substance abuse or other impairment. Many of these matters were originally brought to the Board's attention as a result of hospital legal action, criminal charges or reports by the Bureau of Drug Control of DHEC. Where there is public harm or the integrity of medical care is compromised, the Board has no option but to proceed with disciplinary action.

There are instances, however, where a physician recognizes his problem, self-reports, and gets treatment before any public harm or adverse action has occurred. For these cases, the Board has recently developed its Interim Agreement option. This is available for physicians who self-report their substance abuse and seek appropriate treatment before any public harm, hospital action or other legal action has occurred. The purpose of this program is to

allow physicians to come forward for the first time, report their problem and seek appropriate treatment without concern that traditional disciplinary sanctions will be imposed. If the physician meets the criteria for this program, he then enters into an Interim Agreement with the Board. The Agreement is designed to assist the physician in his continuing recovery while monitoring him to insure continued aftercare and public protection.

The Interim Agreement generally requires random drug/alcohol screens, documentation of continuing participation in an aftercare program and appropriate monitoring of the physician's practice. This Agreement is not considered a disciplinary Final Order. Therefore it is not reported to the computerized disciplinary bank of the Federation of State Medical Boards. There are currently a number of physicians practicing pursuant to the Interim Agreement. The Board believes this Interim Agreement represents a delicate balancing of the interests of treatment, recovery and public protection. For these reasons, an Interim Agreement is not available to a physician whose conduct has resulted in public harm, criminal charges, or legal action by a hospital. □

"Hudley, why don't you hit yourself over the head with a hammer the instant you get up in the morning? If you hit yourself hard enough, you will remain unconscious the whole day and achieve virtually the same results you would from a whole gallon of spirits—with much less wear and tear on the kidneys."

—Actor Donald Crisp cynically giving medical advice to alcoholic Hugh Williams in *Wuthering Heights*.

BRIGHT LIGHTS IN DARK PLACES: PHYSICIAN RECOGNITION OF ALCOHOLISM

GREGORY L. PHELPS, M.D., M.P.H.*
N. PETER JOHNSON, PH.D.**

Alcoholism is one of the three most prevalent illnesses seen by primary care physicians, but is also one of the least recognized. Alcoholism is second only to cardiovascular disease in morbidity and mortality¹ and one and a half more prevalent than diabetes.² However, many physicians are unprepared to diagnose this disease. For example, it was found that 60% of alcoholic patients in one family practice were successful in remaining anonymous.³ In several studies⁴ it has been shown that over 90% of primary care physicians ask about alcohol consumption but in a way that yields only a 40% sensitivity for detecting alcoholism. Often even when the diagnosis is made, treatment—or even its recommendation or referral—is not given. One review of 84 emergency room patient records with blood alcohols greater than .100 found NO patients referred for counselling.⁵

In a primary care practice an average of 20-25% of the patients are alcohol affected.⁶ In inner city practices, this may run as high as 40%. An average of 30% of hospitalized patients have alcoholism as a significant co-factor. We asked South Carolina family physicians who hospitalize patients to estimate the alcohol load in their patients. Over 19% felt that NONE of their patients had alcoholism as a significant co-factor. Eighty percent of the physicians estimated that 29% or fewer of their patients had problems with alcohol.

Many physicians tend to diagnose alcoholics as "Someone who drinks more than I do." While 90% of physicians ask about alcohol habits, the two most common questions asked are "Do you drink?" and "How much do you drink?" Alcoholics tend to answer the questions "No!" and "Two beers" respectively. The

TABLE 1

What Percent of Your Hospitalized Patients
Have Alcoholism as a Major Co-Factor?

% of patients	Frequency	% of MDs	Cumulative %
0	50	19.4	19.4
10	164	44.2	63.6
20	43	16.7	80.2
30	32	12.4	92.64
>30	19	7.36	100.

sensitivity of this set of questions is about 40%.⁴ By asking two different questions the sensitivity can be raised to 90+%. These questions are "Have you ever had a drinking problem?" and if yes, "Have you had a drink in the last 24 hours?" Other questions that may be asked include the CAGE Questions and the Michigan Alcohol Screening Test (MAST). The Cage Questions are asking the patients about feelings or needs to:

Cut down?

Annoyance about alcohol queries?

Guilt about Drinking?

Eye Openers? or Early Morning Drink?

Two affirmative answers is suspicious.

The MAST test contains 25 questions that indicate not only the possibility of a problem but also the depth of the problem. If five of the questions are answered affirmatively then the patient "probably" has a problem, nine and the patient "definitely" has a problem and the average person entering treatment has a score of 24. While none of these screening devices should be considered absolutely diagnostic, their use in preliminary identification is of immense value.^{7, 8} Surprisingly, over 90% of surveyed S. C. family physicians indicate that they "never" use these questions.

Laboratory results can also be of help in confirmation of clinical suspicions, or of screening indications. Any random blood alco-

* Route 1, Box 144, Richburg, S. C. 29729.

** Office of Alcohol and Drug Studies, Department of Neuropsychiatry and Behavioral Science, USC School of Medicine, Columbia, S. C. 29208.

hol level over .150 without gross intoxication is prima facie evidence of alcoholism and demonstrates a high level of tolerance. A blood alcohol while visiting a physician's office over .100 or a BAL over .300 EVER is also diagnostic for alcoholism.⁷

Several other tests are helpful in confirming suspicions of alcoholism. Liver enzymes are commonly examined, but beware that changes in liver enzymes are insensitive and indicate a higher level of alcohol consumption for a long time. Aspartate aminotransferase (AST, SGOT) alanine aminotransferase (ALT, SGPT) are non-specific (elevated in fatty liver, cirrhosis, alcoholic hepatitis as well as non-alcoholic liver disease). The AST may well be higher than ALT because alcohol may selectively inhibit ALT synthesis. Gamma glutamyl transferase (GGPT GGT) changes are sensitive for alcoholic intake though they do not signify liver damage. GGPT changes are induced over several weeks and returns to normal weeks to months after abstinence.²

An elevated or high normal High Density Lipoprotein (greater than 60 HDL) and elevated Mean Corpuscular Volume (MCV) are also commonly found with high alcohol intake levels. The MCV changes may be a combined result of vitamin deficiency and direct alcoholic toxicity on the bone marrow.⁹

The principal diagnosis of alcoholism may be made much earlier on the basis of family and personal histories. The following are some of the red flags for consideration as connected with drinking:

1. Marital problems;
2. History of four intoxications in the last year (from either patient or family);
3. Any arrests for driving while intoxicated;
4. Injuries while intoxicated;
5. Legal problems from intoxication;
6. Persons reported as intoxicated at work

or who need to drink to function; and

7. Family history of alcoholism.²

Most physicians recall the alcoholic as the emergency room end-stage alcoholic with bruises, jaundice, ascites. The temples, testicles and extremities are wasted. The nose and liver are often enlarged and the face is often covered with spider nevi. Earlier physical signs are more discreet and require greater diagnostic skill. The only evidence may consist of tremulousness, tachycardia and hypertension.

Alcoholism is a prevalent disease in South Carolina, associated with extensive morbidity and mortality. It is particularly devastating because neither the patient nor the doctor wish to admit its presence. When physicians begin to confront patients earlier with the results of screening, lab tests and exams, the hole the patient is digging for himself may not get quite as deep, and the bottom the patient hits need not be so devastating. □

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INTERVENTION: RAISING THE BOTTOM

E. G. (SKIP) RUNGE, JR., B.A., C.A.S.*

Not too many years ago, the accepted thinking about what could be done to help a patient dependent upon alcohol or another drug was based upon the notion that the patient had to "hit the bottom" before anything of any consequence could be done to help. It was as if the patient must somehow tire of the symptomatology before treatment could be attempted. We assumed that an individual who was sick in mind and body would be as physically and emotionally capable of making a decision about the need for treatment as if he or she were well.

The belief that in order to treat chemical dependence, the symptoms had to be as bad as they could get was as potentially harmful to the chemically dependent patient as it would be to a patient with any other chronic, progressive, life-threatening disease. Waiting for the addicted patient to "bottom out," to "want" help, or to be "ready" for recovery we observe the disease progressing relentlessly to a point where the dependency becomes increasingly more difficult to treat, rather than easier. Yet waiting for the patient to become motivated, to get well by experiencing greater pain from the progressing disease is still sometimes done with the very best intentions. It is, however, an attempt to help the patient based on a limited and inaccurate understanding of addiction disease. It is the nature of addiction disease itself that precludes an addicted and debilitated patient from making a good, competent and objective decision about the need for help.

Current knowledge of addiction indicates that it is a complex, predictable progressive disease, yet it is one which responds to treatment at any point along its line of progression. It is also currently accepted that patients who are treated earlier in the progression of the illness stand a better chance of responding favorably to treatment.

Alcoholism or addiction to any other drug is a primary, metabolic disease with a strong ge-

netic component. It is complicated by patterns of behavior and delusion bent to serve the continuing progression of the disease. While to treat the illness symptomatically is tempting and, in fact, often necessary for the management of a crisis or emergent consequences which occasionally arise, attempts to treat the medical consequences of the illness alone without addressing the underlying dependency are futile in the long term.

Likewise, attempts simply to stop the drinking or drug use without treating the dependency are comparatively as futile as trying to treat a brain tumor by only medicating the headache pain. Finally—and most obviously—treatment without stopping the drinking or drug taking is doomed to certain failure.

It is absolutely essential that an accurate diagnosis be made and that the patient accepts it. The patient must see the illness as one for which he can identify the symptoms as he experiences them in his own life. In the absence of the patient's self-diagnosis and identification with the illness, the prognosis for arresting the illness is poor.

Complicating the ability to self-diagnose as the illness progresses is the increasing rigidity and overuse of defense mechanisms which protect the patient from emotional pain. The rigidity of these defenses, particularly rationalization, projection, and denial, eventually becomes the basis for a complex delusional system which effectively hides the knowledge of the presence of the illness from those who have it. Defenses against the acceptance of the illness work with amazing efficacy, sustaining denial of the illness even to the point of premature death. A spouse, family member, physician, or any other caring person attempting *individually* to confront the disease will be met with a strong delusional system which is nearly impossible to penetrate alone.

What can and most often does overcome the defenses is the power of a unified, planned, group effort to intervene.

Intervention can be most effective when per-

* 1107 48th Avenue N., Suite 111, Myrtle Beach, S. C. 29577.

formed in a highly structured confrontation made by family members and other caring individuals performed in the style originally popularized by Dr. Vernon Johnson, founder of the Johnson Institute in Minneapolis, Minnesota.¹ This model has become accepted as the standard of practice for intervention in addiction disease.

Confrontation done in the spirit of loving firmness methodically challenges denial of the illness through irrefutable facts, verbalized feelings, and detailed accounts of observed behavior. Intervention often can accomplish by the power of a caring group what no individual had formerly been able to achieve. Even more importantly, such a confrontation provides the intervening group members the opportunity to resign from the painful enabling roles they have inadvertently adopted in response to the chemically dependent loved one. The opportunity for each member of the group to say aloud to the patient how living with the patient's chemical dependence has been painful can be an opportunity—sometimes for the very first time—for the family to feel as though their feelings truly have been heard.

In preparation for intervention, members of the family first undergo a comprehensive and thorough training sequence in which they learn in detail about the illness of chemical dependence, the dynamics of denial, and the process of intervention. They have an opportunity to examine and resolve their own resistance and defense mechanisms which might, if left unresolved, accidentally sabotage the intervention process. At the conclusion of this training sequence, the family meets to confront the individual with the consequences of the illness as they have experienced them and to present the patient with their request that help be accepted immediately. This session is done without any warning to the person who is being confronted. Any indication to the patient that a confrontation is pending will result in the intervention being sabotaged by the patient. Defenses will be reinforced, and the task of the group will be much more difficult. The element of surprise helps to shift the balance and makes the likelihood of breaching the defenses much greater.

In the intervention session, the individual group members present to the prospective patient in predetermined order written lists of

incidents in which the patient's illness caused them pain or suffering. The family members are encouraged to present the data as objectively as possible and in such a way as to avoid arousing the prospective patient's defensiveness. Simply stating to the patient what happened, when each incident took place, and what feelings resulted provides the patient powerful and irrefutable data. In the same manner, the family presents to the patient in very explicit terms exactly what course of action they expect from the patient. Most often the response is a heartfelt promise to quit drinking or using the drug; the chemically dependent individual honestly believes in his or her ability to stop using the drug and that in doing so, the pain experienced by the family will stop. The family well trained in intervention technique sees this promise for what it is and refuses to accept it, knowing that by virtue of the nature of the illness, it cannot be kept, nor would simply stopping the use of the drug restore the patient or the family to a happy and functional state. At this point in the intervention process, it is very important that the family members explicitly detail the consequences that the patient will experience if he or she refuses to accept help. The group must be careful not to state any consequences they are not fully prepared to follow through, lest the patient perceive them as idle threats no different from threats the patient has heard from the family on many occasions in the past.

Intervention should not be entered into casually or without help from an individual trained in the use of intervention techniques. Yet when the power of a group of caring family members which often may include the patient's physician, employer, and clergyman is experienced by the patient, it can provide the best point of leverage in overpowering denial. It provides the best possible opportunity to allow the patient to self-diagnose and identify the need for help.

Should the intervention fail to achieve an acceptance by the patient of diagnosis and the need for help, there is still the lasting effect of having broken the forced silence in the family. Things cannot go back to where they were prior to the family intervening. Often the result is a weakening of the defenses which raises the opportunity to re-intervene at a later time

when the patient begins to experience things getting worse. In this sense, there is no "failure" in intervention. Rather, the desired outcome is merely delayed until the denial is eventually overcome through subsequent sessions.

It is tempting to the physician to avoid confrontation whenever it is possible. Confrontation often appears to jeopardize the special helping relationship of the physician and patient. However, it is incumbent upon the doctor, if unable to help, that he at least avoid inadvertently making things worse by diagnosing only the secondary physical damage and failing to address the primary illness of chemical dependence.² Having incorporated an understanding of the process of intervention as

opposed to enabling, the physician is offered the opportunity to be satisfied in the knowledge that when he has done what he can do to support intervention, he may have done—at least for the time—all there is that can be done. As an illness that constitutes one of the leading health problems in modern times, addiction disease threatens the life of those who have it and of those who live in its proximity. For many, intervention represents the first part of the process of recovery; for others, it may be the last hope for saving a life. □

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TWO SHIPS IN THE NIGHT PHYSICIAN USAGE OF COMMUNITY DRUG AND ALCOHOL TREATMENT CENTERS

GREGORY L. PHELPS, M.D., M.P.H.*
DEBORAH B. GRAHAM, M.A., C.A.C.**
N. PETER JOHNSON, Ph.D.***
CONNOR P. MULCAHEY, B.A.***

HISTORY

The Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 was signed into law December 31st of that year. Through that law was created the National Institute on Alcoholism and Alcohol Abuse and the National Institute on Drug Abuse. South Carolina, which has had a Commission on Alcohol and Drugs for 30 years, in 1974 developed a statewide system of county drug and alcohol commissions. Despite the involvement of these commissions in treatment and referral for 14 years, it was our perception that South Carolina's physicians have not maximally utilized the available resources. Of 50,242 clients served in FY 87-88, only 311 or 0.74% were referred by a physician. This paper reports results of a survey of physicians and treatment centers to test the perception of minimal interaction.

In the spring of 1988, a survey was performed of County Drug and Alcohol Commission directors in South Carolina. Responses were obtained from 20 of the 38 county commission directors and surveys were also mailed out to all members of the South Carolina Academy of Family Physicians.

When asked about involuntary commitment, it was clear that the majority of physicians contacted had not committed anyone under the 1987 alcohol statute.

These data mean that 9.5% of family physicians are responsible for 45% of the alcohol

* Route 1, Box 144, Richburg, S. C. 29729.

** Former Director, Hazel Pittman Center, Chester, S. C.

*** Office of Alcohol and Drug Studies, Department of Neuropsychiatry and Behavioral Science, USC School of Medicine, Columbia, S. C. 29208. Address reprint requests to Dr. Johnson.

TABLE 1

**Physician Ranking of Treatment
Modalities for Suspected Alcoholism
(Percent Who Used 1st & 2nd Rankings)**

<i>Treatment Modality</i>	<i>Percent of Physicians</i>
Alcoholics Anonymous	81.0%
Inpatient care	59.7%
Community A&D Com.	42.0%
Psychiatrists/Psychologists	17.0%
Treatment by self	10.5%

TABLE 2

**Involuntary Commission of Patients by
South Carolina Family Physicians**

<i>Frequency of Commission</i>	<i>Percent</i>
Never	62.6%
One	9.0%
Six or more	9.5%

TABLE 3

**Frequency of Physician Interaction with
County Alcohol and Drug Commissions**

<i>Function</i>	<i>Percent</i>
Agency Board	4.8%
Advise Agency	8.5%
Visited Agency	20.5%
Visited by Agency	26.7%
Referred Patient	63.1%
Never Referred	36.9%

commissions being accomplished at the present time.

Of 20 community directors responding to the survey, 15 had received referrals from primary care physicians "occasionally" to "never." Five had referrals from physicians "regularly" or "often," and seven have a physician on the agency board. Nine agencies indicated a physician advisor: one is an "addictionologist," six are family physicians and three general physicians. Fourteen county agencies indicated that they had visited with physicians in their communities and 12 had attended medical staff meetings.

CONCLUSIONS

A small group of South Carolina physicians are providing most of the referral service to county alcohol and drug agencies. Most of the community agency directors said 0-15% of doctors refer to them, another 5/20 said that between 16-39% refer to them and two particularly blessed agencies said that 91-100% of physicians refer to them.

In terms of being visited by doctors, 16/20 said they had been visited by 0-5% of the community doctors. From a teaching standpoint, of the seven family practice residencies in the state, all agency directors responded that there was a residency in their area, but only three had residents rotating through their program.

Many of the directors complained that they felt that they were only used as a court of last resort or for indigent patients.

In short, what it appears has happened is that a whole system of alcohol treatment has cropped up on a statewide basis that is essentially beyond the horizon of South Carolina's primary care physicians, despite good evidence that such outpatient treatment is both cost effective and efficacious. To reiterate, by the state's own figures, less than one percent of patients seen by the statewide system were referred by physicians. In view of primary care physicians' reluctance to view themselves as the best treatment source and the need for treatment of these patients with often limited income, it appears that some major bridge building will need to be done. □

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OBSERVATIONS ON THE MANAGEMENT OF ALCOHOL WITHDRAWAL SYNDROME

RAJEEV VASUDEVA, M.D.*
STEPHEN HOLT, M.B.**

INTRODUCTION

The treatment of alcohol withdrawal syndrome has varied over the last two centuries depending on local traditions and prevailing medical knowledge. In 1838, Romano favored general supportive measures of fluids and nutrition over pharmacologic therapy with quinine and opium, and in 1930 drastic interventions such as spinal drainage of cerebrospinal fluid, with the intention of decompressing the brain swelling, were found to be ineffective.¹ The diagnosis of alcohol abuse may become apparent only when the patient demonstrates signs and symptoms of alcohol withdrawal and the management of acute intoxication or subsequent withdrawal reactions is often problematic. This situation is compounded in the individual with combined drug-alcohol addiction, and lack of patient cooperation is frequently present.² This article will highlight the clinical management of patients with alcohol withdrawal syndrome.

INITIAL ASSESSMENT

The initial assessment must be individualized and include a thorough history and physical examination as well as appropriate laboratory testing. The physician should be attuned to the multiorgan damage from chronic alcohol abuse that may determine the need for complex specific and supportive treatment. In the intoxicated and uncommunicative patient, it is important to keep in mind other causes of clouded consciousness including: head trauma, overdosage of other drugs, life threatening illness or severe metabolic abnormalities resulting from alcohol related diseases such as hemorrhagic pancreatitis,

gastrointestinal bleeding or perforated peptic ulcer.

The maintenance of an adequate airway and circulatory support are overriding objectives together with continued close supervision and observation of the level of consciousness. In general, improvements in the level of consciousness over the first few hours would suggest inebriation but vigilance must be maintained for other life threatening conditions. In general, profound unconsciousness secondary to alcohol alone will not last beyond four hours after the last drink.² Physician continuity is advisable for the initial and subsequent follow-up observations so as to obtain an accurate assessment.

Blood alcohol levels, serum glucose and drug screen panels including drugs such as salicylates, amphetamines, barbiturates, benzodiazepines, cannabinoids, cocaine, opiates and phencyclidine are very helpful in unconscious or obtunded patients. The decision to order appropriate laboratory tests and investigations are determined by the clinical evaluation of the patient.

CLINICAL FEATURES

Alcohol withdrawal develops usually following cessation or a sharp reduction in alcohol intake. This disorder presents in a wide spectrum of manifestations ranging from anxiety, decreased cognition and tremulousness through increasing irritability and agitation, sometimes culminating in frank convulsions as is seen in delirium tremens. All patients do not manifest every symptom. The patient may present with a mild clinical picture that is manifested by a tremor of the hands (shakes or jitters); autonomic hyperactivity in the form of tachycardia and diaphoresis; insomnia, and/or nightmares; anxiety, nausea and vomiting.^{3, 4} The most common form of the syndrome begins six to 24 hours after cessation of drinking,

* University of South Carolina School of Medicine, Two Richland Medical Park, Suite 506, Columbia, S. C. 29203.

** Address correspondence to Dr. Holt at USC School of Medicine, Two Richland Medical Park, Suite 506, Columbia, S. C. 29203.

peaks at 36 to 48 hours and disappears in 72 to 96 hours. All symptoms may be exacerbated by various sensory stimuli or unfamiliar surroundings.² Outpatient treatment of withdrawal can be undertaken in selected patients.²

About five percent of patients with alcohol withdrawal may show evidence of severe withdrawal symptoms including visual, tactile or auditory hallucinations and generalized seizures. The diagnosis of delirium tremens (DT) is made when the clinical course progresses beyond the usual symptoms of withdrawal. There may be an increased likelihood of developing severe withdrawal symptoms in patients with recurrent medical problems, prior history of seizures or DT and increased quantity and frequency of drinking.⁵ Often, DT occurs unexpectedly in a patient who is hospitalized for some unrelated problem, thereby reinforcing the need to suspect alcohol withdrawal in all cases of unexplained delirium. Prophylactic measures are important to avoid the high morbidity and potential mortality from alcohol withdrawal. Alcoholic hallucinosis and chronic brain syndromes may further complicate the clinical presentation.

MANAGEMENT OF WITHDRAWAL SYMPTOMS

After an initial assessment which includes a thorough evaluation of organ systems likely to be impaired by heavy drinking, the next step is adequate nutrition and rest. Thiamine deficiency is the commonest remedial problem and in its severe form can result in Wernicke's encephalopathy. Patients should receive 100 mg of intravenous thiamine before any glucose is administered. In lower risk patients, the preferred route is 100 mg of thiamine by mouth or intramuscular injection. Supplementation of other vitamins may be important, e.g., Vitamin K or Vitamin C.

Chronic alcohol consumption results in depletion of magnesium by a diuretic effect. Hypomagnesemia can cause hypocalcemia and exacerbate the manifestations of thiamine deficiency.⁶ If hypomagnesemia is severe, correction should be accomplished cautiously by an intravenous route or intramuscular injection. Hypophosphatemia may be present because of poor nutrition and it may become evident after intravenous glucose administration which can

result in an increased cellular uptake of phosphate. Oral phosphate and intravenous potassium phosphate are reserved for selected cases. Regular monitoring of serum phosphate levels is important.

In general, liberal use of intravenous fluids should be avoided since most patients are eu-volemic and may even be overhydrated or have problems with serum osmolality. However, intravenous access should be established to permit appropriate hydration or the administration of parenteral medications. An environment that is calm, reassuring and unalarming plays a pivotal role in the successful therapy of alcohol withdrawal. Outpatient withdrawal therapy may be accomplished in selected cases as long as certain criteria are fulfilled.² A young, otherwise healthy and highly motivated patient who presents with mild withdrawal symptoms would be the ideal candidate. Absence of other significant illnesses and lack of history of seizures or severe withdrawal symptoms in the past is a prognostic indicator. A good rapport between patient and physician, easy availability of the physician and a strong and adequate social support network are necessary for a successful outcome.⁷ Upon recovery, it is important to pursue counselling or referral to Alcoholics Anonymous to maintain long term abstinence.

PHARMACOTHERAPY

Benzodiazepines are the drugs of first choice in the treatment of minor withdrawal symptoms. Benzodiazepines with a short elimination half-life (oxazepam and lorazepam) are especially useful in patients with severe liver impairment or pre-existing encephalopathy. Some clinicians have favored the use of drugs like diazepam or chlordiazepoxide which have longer half lives. The choice of a specific sedative is less important than titrating adequate doses to achieve sedation. Sufficient doses of a drug should be administered on day one to achieve alleviation of symptoms. The dose should then be decreased by 25 percent on successive days over a period of three to five days.

There are a number of randomized, controlled trials describing the use of beta-blockers or clonidine along with benzodiazepines for the treatment of alcohol withdrawal.^{8, 9} The

autonomic discharge that usually accompanies alcohol withdrawal is effectively suppressed by these drugs. Symptomatic therapy, in the form of antacids, antidiarrheals or analgesics, may be used cautiously in the first few days of management.

The treatment of patients with delirium tremens requires an assertive approach and a close attention to associated medical problems. These patients frequently have severe electrolyte and metabolic abnormalities, resulting in a potentially high mortality rate and they often need to be monitored closely in an intensive care unit. Intravenous diazepam can be used in the management of DT to provide predictable and stable blood levels. The majority of patients with DT are too ill to tolerate oral medications and the intramuscular absorption of benzodiazepines is unpredictable and often is erratic. Therapy can be commenced with 5 to 10 mg of diazepam intravenously and repeated every five minutes until sedation is achieved. The dose may be repeated every two to four hours as necessary. Antipsychotic medications such as haloperidol or thioridazine can be reserved for the treatment of psychotic patients with delusions or hallucinations.

Alcohol withdrawal seizures require special pharmacologic therapy. There is little evidence that phenytoin is entirely effective in drug withdrawal seizures. The risk of seizures has usually passed by the time effective drug concentrations of phenytoin are reached. As for prophylaxis, there is conflicting evidence regarding the role of anti-convulsants in providing protection against seizures.^{10, 11} If polypharmacy is necessary the physician should be aware of drug interactions, especially those based on interactions with cytochrome P450

enzyme systems.

CONCLUSION

The management of alcohol withdrawal syndrome involves a careful general medical assessment together with appropriate pharmacologic intervention. Prompt diagnosis and intervention will lead to a reduction of morbidity and mortality due to alcohol withdrawal. Although attention must be focused on the medical needs of the patient, the physician may be of great service by directing the patient to appropriate treatment for the underlying drinking problem following recovery. □

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NEVER TRY TO CARRY A DRUNK BY YOURSELF

EFFECTIVE USE OF SELF-HELP GROUPS

N. PETER JOHNSON, Ph.D.*

GREGORY L. PHELPS, M.D., M.P.H.**

SUZANNAH K. McCUEN, M.D.***

INTRODUCTION

Many physicians know the clinical characteristics of alcoholism, but fewer know about treatment of the disease.^{1, 2} The American Medical Association designation of alcoholism as a disease (1957), and addictions as a disease (1987) did not produce instant cures and changes. Addictionists believe that self-help groups should be an integral part of treatment and long-term recovery.^{3, 4} The historic prototype for self-help groups is Alcoholics Anonymous (AA) which was created in 1935 by physician, Robert Holbrook Smith ("Dr. Bob"), and stockbroker, William Wilson ("Bill W."). Since then more than 150 parallel groups have been developed, the most prominent of which are Al-Anon (families and friends of alcoholics), CA (Cocaine Anonymous), COA (Children of Alcoholics), NA (Narcotics Anonymous) and OA (Overeaters Anonymous) and all operate on the same general principles (see Table 1).

A survey of South Carolina physicians shows that referral to AA meetings is the most common therapeutic maneuver used in alcoholic patients (see "Two Ships in the Night" in this issue). This referral must be done in a manner which facilitates compliance. A recommendation to "try AA" is about as effective as saying, "Try to lose some weight" without supplying dietary instruction or followup. Persons who present to the clinician with characteristics indicating alcoholism⁵ should be given the recommendation of attendance at self-help group meetings. This needs to be conducted in a dignified fashion which supports

the person but strongly encourages their initiation of the process. Since patients may have strong reservations about attending such meetings, the physician needs to develop techniques which facilitate their acceptance. This might include statements about the effectiveness of AA, and the chronic, progressive, eventually lethal course of the disease. Many patients will have previous failures with attempted abstinence, with a subsequent lowered self-esteem.

One facilitative suggestion is to keep a list of persons who are willing to take patients to self-help group meetings. Patients who are successfully dealing with recovery can perform this role, but names can also be obtained from self-help groups directly, county alcohol and drug agencies, local hospitals and colleagues. AA is usually listed in the phone book and will supply meeting times, days and places, as well as pamphlets for distribution. Attendance at the first meeting is the major hurdle—meeting a group of strangers and potentially discussing a deep secret is a challenging step. Person to person contact, through guides or temporary sponsors, may ease this difficulty.

With no structured professional guidance, self-help group members provide assistance to individuals who have a chronic, progressive and eventually lethal disease. Self-help group members do not provide medical or psychological diagnoses, and do not damage the therapeutic alliance the patient may have with a physician or counselor.⁶ The self-help group members will share their self-evaluations and past failures which are usually similar to those of the newcomer. They will then indicate more recent successes as a direct result of following the suggested steps of recovery. As a graduate student in an alcohol and drug course, one of us (NPJ) demonstrated a lack of fortitude when

* Office of Alcohol and Drug Studies, Department of Neuropsychiatry and Behavioral Science, USC School of Medicine, Columbia, S. C. 29208.

** Route 1, Box 144, Richburg, S. C. 29729.

*** Psychiatry Resident, West Virginia University, Morgantown, W. Va.

TABLE 1

The Twelve Steps of Alcoholics Anonymous

1. We admitted we were powerless over alcohol—that our lives had become unmanageable.
2. Came to believe that a power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God, as we understood Him.
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly ask Him to remove our shortcomings.
8. Made a list of all persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out.
12. Having a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics, and to practice these principles in all our affairs.

(For further information call local AA, or write Alcohol World Services, Box 459, Grand Central Station, NY, NY 10017.)

required to attend an open AA meeting. This anecdote shows the dilemma faced by our patients who we know need to be self-help participants, but whose need is accompanied by an overwhelming fear of social stigmatization. This fear often carries over to the physician. In an attempt to avoid labels and confrontation, physicians bolster patient denial and thus, through worsening of conditions, contribute to delays in diagnosis and treatment. Many newly diagnosed individuals literally cannot envision life without alcohol or other drugs.

To effectively refer patients to self-help groups, give explicit instructions, including affirmation of the effectiveness of self-help groups, that the patient attend daily meetings for three months, and that the patient become actively involved in the process of recovery. Patients who do not attend meetings will generally have a poor prognosis. Patients who get thoroughly involved will have a much more rapid recovery rate.

Table 2 includes a helpful list of suggestions which might be verbally presented to each patient. [EDITOR'S NOTE: You may wish to photocopy this page and give it to patients.] Since some alcoholic patients have difficulty reading and comprehending, you might have someone provide the information verbally.

CATEGORIES OF MEETINGS

AA has grown over its more than 50 years to include formats which suit many different needs. There are smoking and non-smoking meetings, and gay meetings in some large cities.

1. **OPEN MEETINGS:** Any interested person may attend OPEN self-help group meetings. These are for curious persons including physicians. Once acquainted with the process, you could accompany patients to such a meeting.
2. **CLOSED MEETINGS:** Those people who are alcoholic *or* who have a desire to stop drinking may attend CLOSED meetings. In special circumstances, professionals may be invited to attend these meetings, but inclusion should never be assumed. These meetings more closely guard the anonymity of the patient.
3. **DISCUSSION MEETINGS:** The most common type of self-help group meeting is a general discussion meeting. Typically, the chairperson or other participant suggests a topic for the group. At many meetings, the arrival of a newcomer such as the patient you refer, will cause the topic to be a discussion of "the 1st Step and the 3rd Tradition." The participants will describe for benefit of

the newcomer what their lives were like before entering the self-help group, what they changed in their lives, and what life is like for them at the present time. These comments are useful for many patients in cracking through denial, accepting the course of action required for recovery, and in recognizing that their problems are not unusual. Each person typically has a chance to speak if they wish, but is not required to speak.

4. **SPEAKER MEETINGS:** A smaller number of self-help group meetings provide a speaker, usually of long sobriety, who is the only person to talk that evening. The speaker describes his/her life before entering the self-help group, what discoveries they have made, and concludes with a description of how life has changed for them since beginning recovery. This is an in-depth discussion and may be useful for patients to envision the recovery process serially.

Other significant types of meetings which may be found listed in the self-help directory are:

5. **STEP MEETINGS:** Information describing one of the suggested steps for recovery is read from the book *Twelve Steps and Twelve Traditions*⁷ after which participants usually discuss that step. These are useful for the patient to examine the process undergone by other recovering individuals.
6. **BIG BOOK MEETINGS:** Participants read a short section from the founding book, for instance *Alcoholics Anonymous*,⁸ from which AA derives its name. The participants may read or pass, which assists illiterate patients who might otherwise not have been able to participate fully. These discussions are useful for patients in examining their own progress.

As suggested above, most alcoholics and addicts need to understand that they are very similar to other addicts and alcoholics. Many individuals feel that their circumstances are unique. A morbid joke in the addictions field is that patients can die from "terminal uniqueness." As such, patients should be encouraged to attend a broad variety of meetings during the initial phase of their recovery. The follow-

ing types of groups are found in many areas and are useful for dealing with specific patient problems. For example, a patient told one of us that he had once attended AA, but that it was not for him because the cigarette smoke bothered him too much. Rather than confront his denial, the practitioner referred him to a non-smoking group of AA, and the patient has presently been abstinent for more than two years. In this instance the clinician's understanding of the characteristics of self-help groups was instrumental in the recovery of the patient.

7. **NONSMOKING MEETINGS:** Many addicted individuals smoke cigarettes heavily and continue to smoke during recovery. In most metropolitan areas there are meetings at which smoking is not allowed (either by choice or due to building restrictions). If these are not listed in the meeting directory, such information may be gained by phoning the self-help group number in the phone book and asking for assistance.
8. **SINGLE-SEX MEETINGS:** Some individuals feel more comfortable talking about specific issues in a single-sex group. An additional usefulness results from a tendency in some areas for males to dominate the conversation to the exclusion of any timid females. Therefore, it is useful to know of single-sex meetings in your area. Usually in larger cities single-sex groups are listed in the directory of meetings. These can also be located through the central self-help group office.
9. **ALTERNATIVE LIFESTYLE MEETINGS:** In metropolitan areas, specific self-help meetings exist for gay men and Lesbian women. AA meetings are not restricted and may be attended by heterosexual persons as well. These meetings are either listed in the directory or may be located by calling the self-help office.

Specialty groups should be used as an adjunct to a balanced program of self-help group meetings, and should not be the only meetings your patients attend.

USEFUL ADDITIONAL HINTS

1. Keep a list of recovering individuals who agree to help new patients in need of assistance. These may serve to call upon pa-

TABLE 2
RECOMMENDATIONS TO PATIENTS

The following are intended as suggestions for each patient for whom alcohol appears to be a problem.

1. Your attendance at AA is necessary in dealing with your problem. Failure to stop drinking will result in further medical harm, loss of thinking capacity, suicidal thoughts, and death.
2. Please go to one meeting each day for the next three months. Keep track of the number of meetings—go to 90 meetings in 90 days.
3. Arrive early for the meetings and talk to other participants before and after—socialization with them may be very important for your recovery.
4. At the start of each meeting participants may introduce themselves by first name and say that they are alcoholic. It is not necessary for you to state that you are an alcoholic—feel free to say “my name is _____, and I am a visitor.” However, if/when you are certain you have a problem related to alcohol, there is a therapeutic benefit to stating that you are alcoholic.
5. As you attend meetings, listen carefully to each person who talks—do not spend your time planning an answer. The members of the group have information you need very badly—listen for those messages. They know something you don’t.
6. The members of the group will not talk about you. Rather, they will talk about their experiences, strengths and hopes. You might listen for persons with similar problems to yours and find what worked for them.
7. Pick up the pamphlet on *Sponsorship*, read it thoroughly, and find a sponsor of your same sex within the first month. This person may serve as a guide for you in a temporary relationship while you are learning the process. Note that the relationship is temporary, although some last for many years.
8. Collect first names and phone numbers of individuals of the same sex to whom you can talk later. Call them or me to talk about any difficulties, and especially call if you find yourself considering taking a drink or drug.
9. Pitch in and work on the steps suggested for recovery. Also pitch in at the meeting—empty ashtrays, make coffee, be a participant. You will get more out of the process.
10. If for some reason you don’t like the first meeting you attend, try other meetings until you find ones you do like. Unconscious thoughts may tell you, “these aren’t my kind of people,” in order for you to keep drinking yourself to death.
11. At most meetings a member will provide plastic chips which signify various stages of sobriety. The white chip signifies “surrender” for the newcomer who desires to stop drinking. You are not required to take action. However, when you are ready, pick up a white chip.
12. Please plan a follow-up with me, let me know how your meeting went and any ways in which I can be helpful. Enjoy the process—don’t focus solely on the endpoint.

tients at your request to discuss characteristics of alcoholism or drug abuse and share their personal experiences. They may also agree to take newcomers to a few days of meetings to begin the process.

2. Self-help groups are not religious groups. The spiritual aspects of the program are not required, are non-threatening, and usually talk about a "higher Power." Addicts and alcoholics have become powerless in controlling their drug(s) and can usually accept at least the self-help group as a "higher power." There is also a national atheistic group for alcoholics. In some areas the non-AA group, "Alcoholics for Christ," may assist practitioners with alcoholic fundamentalists.
3. Self-help groups have no dues or fees, but accept voluntary contributions of small size (usually \$1) from their members to defray expenses. Therefore you will not be causing a great expense for your patient by referring him/her.
4. Self-help group members are usually available at all hours. Major cities have recovering people who answer phones 24 hours of each day. They are therefore available for direct discussion whenever needed.
5. An inexpensive supply of pamphlets can be obtained from any local self-help group office. These can be handed, along with a recent local directory, to any patient or fam-

ily member with questions, and also made available in outer office pamphlet supplies.

CONCLUSION

Alcoholism and other drug addictions are chronic illnesses with a potentially fatal course. Self-help groups are one of the earliest and most effective ways to establish and maintain sobriety. Appropriate understanding of the characteristics of self-help groups in your area will help the recovery of your patients and is an adjunct to help the busy physician deal with the estimated 15-20% of patients seen in a busy office practice. Your interest can make a difference in the recovery of your patients. □

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"A lush can always find a reason, if he's thirsty. Listen. If he's happy, he takes a couple of shots to celebrate his happiness. Sad, he needs 'em to drown his sorrow. Low, to pick him up. Excited, to calm him down. Sick, for his health. And healthy, it can't hurt him. So you see, Al, a lush just can't lose."

—James Cagney jawing with the bartender in the film, *"Come Fill the Cup."*

BABY BOTTLES AND FAMILY RATTLES CHILDREN AND SUBSTANCE ABUSE

N. PETER JOHNSON, Ph.D.*

BENJAMIN O. STANDS, M.D.**

MARTHA EAMES, M.D.***

The most important alcohol and drug factors relative to adolescents are (a) an understanding of prevention techniques, (b) the indicative characteristics of developing problems, and (c) the positive actions by practitioners which can cause positive results.

According to high school seniors, alcohol is the most widely used drug among American youth, and although daily alcohol use has declined in the past ten years, approximately five percent of seniors drink daily. The rate of party drinking (five or more drinks in a row at any time during the past two weeks) has fallen to about 37% of high school seniors.

To continue the reduction in teen drinking and abuse, it is necessary for all practitioners to begin preventive efforts as early as is possible. At the very least, we can refuse to be enablers of adolescent drinking.

Self-education by every physician is important. Physicians can learn about alcohol and drug issues by participating in brief educational experiences through local medical schools and state medical societies. In a previous position, one of us (NPJ) developed a linkage between the most trusted pediatrician in town and a local adolescent substance abuse treatment agency to their mutual benefit.

Well-child visits during prepubertal years offer opportunities to discuss alcohol and drug issues in an integrated fashion. Including alcohol questions in regular examinations opens a channel for later discussions, and allows children to determine answers to questions more accurate than those from peers.

One useful question is to ask, "What do your friends say about alcohol and drugs?" Commu-

nication can be opened by suggesting that the child may have wondered why some people drink, or whether there is any harm in trying alcohol or other drugs. Education of patients about alcohol and drug use, as in the case of tobacco use and sexuality, begins in childhood, at a time when family standards and adult values in general are being assimilated by the child. Anticipatory guidance concerning alcohol use during pregnancy is essential for all female adolescents and can be introduced in the same fashion as menstruation and male-female relationships. Patient education is not accomplished in one visit. Well-being and positive attitudes toward self evolve slowly, requiring months and years of emotional and intellectual investment.

Counseling should be consistent with a concern for the child's welfare, while conveying knowledge about the effects of alcohol and other drugs. Alcohol and drug issues should be included in the same fashion as other preventive measures (e.g., "I care about you, so I want to talk to with you about alcohol and other drugs . . .").

PRIMARY PREVENTION

Primary alcohol and drug prevention at the family level involves discussion with the family. Parents must be encouraged to look at how their alcohol and drug beliefs and practices affect their children—children perceive consistencies and inconsistencies in parental practice and preaching. In addition you will find some special issues with families in which parental alcoholism or heavy drug use presently exists (See page 38). Counseling requires continuity and changes of emphasis as the child moves into and through adolescence.

SECONDARY PREVENTION

Secondary prevention identifies those children "at risk" and intervenes early upon those

* Office of Alcohol and Drug Studies, University of South Carolina School of Medicine, Columbia, S. C. 29208.

** 714 Hampton Hill Road, Columbia, S. C. 29203.

*** Lifeplus, 211 Century Drive, Suite 200 A, Greenville, S. C. 29607.

children who are in the first stages of experimentation. Because it is not usually possible to differentiate an at-risk person from a beginning user, these two categories of patients are dealt with identically. Psychological factors, family stresses, family history and peer pressures should be recognized as risk factors.

Education: Once early identification has been made, the next step is discussion with the child, any specific psychological stresses, family stresses, and social pressures being experienced. This is the time when alcohol and other drug issues are addressed individually. After separate discussion with the child and the parents, a family discussion may be in order.

Confidentiality & Communication: A major problem for you and parents, is to know when to believe a child's denial of alcohol abuse. Children are rarely frank with parents and, fearing a betrayal of trust, often are hesitant to confide in physicians. You must tread a fine line to assure confidentiality, lest the relationship be jeopardized. On the other hand, it is best to inform the child that any confidence will be respected as long as their health or life is not in danger. Once the child finds that talking with an understanding adult is possible, fears and guilt can be partially neutralized, and it may be easier for the child to talk eventually with parents (unless they are major contributors to the problem). Concerned phone calls or conversations by friends about alcohol or drug problems of another child should be considered with the greatest urgency since children do not tend to talk to adults about problems of friends.

Age of Onset: The apparent age at which teenagers begin to drink continues to drop in comparison with earlier generations. In the 1930s most adolescents started drinking between 17-19; in the 1940s it had fallen to 14¹ and presently is between the ages of 10-12. Early drinking tends to lead to early problems. We become concerned when anyone younger than 14 drinks at all.

Teenage Drunkenness: Another change is the extent of reported adolescent drunkenness. In three studies of adolescent alcohol use in the Boston area, the proportion of female high school students who reported having been drunk on at least one occasion increased from

14 to 69% between 1965 and 1974, while the proportion of male students reporting this increased from 34 to 70%.¹ These surveys may *underestimate* the degree of alcohol use, because most studies include only students who have remained in school—dropouts have a higher incidence of abusive drinking and drug-ging. Approximately 25% of seventh graders get drunk at least once a year; approximately 10% of high school seniors get drunk at least once a week; and nearly 50% of college students get drunk at least 12 times a year.

Early vs. Advanced Users: A clinical distinction has been drawn between early and advanced adult alcohol abusers.

EARLY ABUSERS are said to be characterized by:

1. a short drinking history of one to two years,
2. drinking that occurs in response to or in temporal relationship with a particular emotionally charged or demanding situation,
3. a previous history of nonproblem drinking,
4. no physical dependence, and
5. mild to moderate alcohol-related behavioral problems (e.g., fights, family problems, deteriorating school performance).

ADVANCED ABUSERS are said to be characterized by:

1. a pervasive abuse pattern,
2. no clear temporal relationship between drinking and specific stresses,
3. prolonged abuse,
4. presence of abuse from earliest drinking,
5. loss of control over drinking, and
6. marked alcohol-related behavioral problems.

The tendency for the young, inexperienced drinker to become intoxicated is a danger due to the potential for overdose and because of the circumstances under which much teenage drinking occurs. Young teenagers tend to drink outside the home, often in a car, and often with the intention of getting drunk. If they lack experience and have few social constraints or diversions, they may drink rapidly, fail to monitor their state and quickly lose awareness of how intoxicated they have become. Besides being lighter in weight than adults, hence re-

quiring a lower effective dose of alcohol, they also become intoxicated at lower levels than do adults.

The pharmacokinetics of alcohol may be altered in other ways in the pubertal and adolescent individual, owing to the distinctive physical changes in this stage of life, notably:

1. an increase in ponderal growth,
2. changes in body composition,
3. redistribution of fat and lean body mass, and
4. increases in circulating blood volume and organ size.

Unique Drinking Practices: These factors, together with the unique drinking practices of teenagers—which can include the following—have unpredictable and often more intoxicating effects on the adolescent.

5. consuming large quantities of alcohol quickly,
6. drinking without eating, and
7. using other drugs concurrently.

Male Reproductive Effects: The effects of alcohol on the male endocrine system have been intensively studied during recent years, and it is clear that acute and chronic use, over a range of doses and in many animal species, has measurable effects on the hypothalamic-pituitary-gonadal axis that are independent of the effects on liver functions.²

1. Depression in the production of luteinizing hormone (LH) resulting from the action of alcohol on the hypothalamus.³
2. Testosterone levels are suppressed in response to decreased LH.
3. Alcohol direct effects on the testes lead to diminished production of testosterone.⁴

Female Reproductive Effects: Less study has been devoted to the female endocrine system, but it has been established that alcohol abuse in women results in (in addition to diminished LH):

1. Severe gonadal failure rather than superfeminization.⁵
2. Reduced or absent menstruation.
3. Loss of secondary sex characteristics such as breast and pelvic fat accumulation.
4. Infertility—failure of the ovaries to function normally as endocrine producers.
5. In alcoholic women, there is evidence

that brain control over sex hormone secretion is disturbed.³

CNS Effects: Of greatest immediate concern for the pediatric age group is the effect of alcohol on the brain. It acts at a cellular level producing changes in the biophysical properties of the neuronal membrane that affect neurochemical transmission in ways that ultimately translate into gross neurophysiological and complex behavioral derangements.⁵

The cortical areas of the brain are the most susceptible to the effects of alcohol. The depression of the integrative functions of the cortex results in varying degrees of impairment of motor and cognitive performance, depending on alcohol dosage.

1. Gross motor activities,
2. fine motor coordination, and
3. articulation are slowed and become inaccurate, random, and less well adapted for accomplishing specific ends.

Changes in sensorium occur as blood alcohol levels increase, causing:

4. stupor,
5. coma, and
6. death from brain stem depression.

The acute effects of alcohol on cognitive functioning include impairment of attention and concentration, short-term memory, and processing and organization of information.⁶

REFERRAL

Care of the youngster who is clearly drinking immoderately is usually beyond the scope of the average practitioner. Once the decision to refer has been made, it must be presented to the patient and the family in a form that is acceptable. You will typically have to overcome resistance on the part of the patient or family or both. Denial, the most common defense of the drinker and of the family, is a powerful obstacle and not easily overcome, particularly if there is a family history of drinking or if one of the parents drinks.

COMBINED ALCOHOL-POLYDRUG USE

The current tendency of adolescents who use drugs is to combine alcohol with other drugs. This exposes them to such additional hazards as drug synergism, deleterious effects, multiple

drug dependencies, and increased risk of overdose. It is rare to find an adolescent in trouble with alcohol alone. More typical is a combination of alcohol, marijuana, and other drugs.

STAGES OF DRUG USE

Epidemiological studies⁵ have shown that high school students who develop problems have typically progressed through four stages of drug use:

- (Stage 1) beer or wine,
- (Stage 2) cigarettes and/or hard liquor,
- (Stage 3) marijuana,
- (Stage 4) other illicit drugs.

Stages 1 and 2 are typical precursors to marijuana use (sometimes called "gateways" since more than 90% of people at any stage have used all of the drugs of the preceding stages). It is important to note that 27% of students who smoke and drink progress to marijuana use, compared with 2% of those who engage in no prior use of legal drugs. Moreover, marijuana use is a critical step toward other illicit drugs, with 26% of marijuana users taking up self-administration of LSD, amphetamines, cocaine or heroin, compared with two percent of those who use legal drugs. In a follow-up study, a fifth stage of drug use was identified: prescribed psychoactive drugs. Early users of marijuana were twice as likely as nonusers to progress to this prescription stage.¹⁶ NIDA statistics indicate that over 90% of teens who use other drugs have used marijuana first. This probably relates more to an increased likelihood for trying a second illicit substance after trying a first illicit substance, than to any physiochemical induction by the drug marijuana.

For the physician, the important facts are that:

1. fads in alcohol and drug use change;
2. young people are prone to experiment;
3. risk-taking youths are concerned with sensation, not consequences;
4. more boys than girls use "other" drugs and combinations of drugs; and
5. alcohol and drug use begins at younger ages each decade.

All of these factors put alcohol and drugs into the hands of those persons with the least

discrimination and the most immature judgment.

PREGNANCY: Ten percent of girls become pregnant during adolescence. Although pregnancies among older teenagers have declined, pregnancies among those under age 15 have risen. In 1988 in South Carolina, there were 3,772 babies born to teenage girls⁷—babies having babies. The pregnancy rate for white American adolescents is twice that for teenagers in any other industrialized country. The rate for Black girls is twice that of white girls. In 1985 adolescent childbearing cost roughly \$16.6 billion in addition to the human toll.

DRUGS: Illicit drug use in the U.S. is greater than any other nation in the developed world. In 1985, about 54 percent of high school seniors used marijuana at some time in their lives, and approximately 40 percent used some illicit drug other than marijuana.

The decline in marijuana use from 1979 to 1984 was slowed in 1985, a disturbing fact since the best single predictor of cocaine use is frequent use of marijuana during adolescence. Cocaine poses a significant threat to public health. In addition, more than 20 percent of American teenagers smoke cigarettes, and six percent are daily users of alcohol.

DATA FROM WEEKLY READER NATIONAL SURVEY ON DRUGS AND DRINKING [A poll of 520,000 children in grades 2-12—comparisons with 1983 survey].⁸

CRACK

- 24% of 4th graders believe their peers are pressured to try crack
- 31% of 6th graders believe their peers are pressured to try crack
- 33% of grades 7-12 believe their peers are pressured to try crack
- 93% of 4th-6th graders believe cocaine is a drug
- 35% of 4th graders who used cocaine did so "to fit in"
- 40% of 5th graders who used cocaine did so "to fit in"
- 43% of 6th graders who used cocaine did so "to fit in"

MARIJUANA

- 25% of 4th graders believe peers are pressured to try marijuana (down from 31% in

1983—similar declines found in all grades)

- 87% of 4th graders believe marijuana is a drug (was 84%)
- 41% of children who used marijuana did so “to fit in” (same)
- 17% of children who used marijuana did so “to feel older” (was 22%)
- 18% of children who used marijuana did so “to have a good time” (same)
- 15% of children who used marijuana did so “to get over feeling bad” (up from 10% in 1983)

BEER, WINE, LIQUOR

- 50% of 4th graders believe beer, wine, liquor are drugs (was 42%)
- 44% of 6th graders believe beer, wine, liquor are drugs (was 28%)
- 34% of children said there is pressure to buy wine coolers
- 36% of children feel pressured to buy wine, beer, liquor

PARENTS

- 38% said parents should teach their kids more about dangers of drugs
- 31% said parents should talk to their kids about their problems
- 17% said parents should set more rules
- 15% requested activities “so kids can have fun without drugs”

CHILDREN

- children believe they can effectively teach younger children about drugs including alcohol
- children believe they should report drug sellers, and encourage others to “just say no”
- the least useful rated step according to children is treatment

ALCOHOL: Alcohol use contributes to motor vehicle accidents and assaultive behavior and is the leading cause of death and injury among young people. Over the last 20 years a greater proportion of 10-to-15-year-olds drink alcoholic beverages than ever before. The first drinking experience is earlier, they drink larger quantities, and report more frequent intoxications. Although girls drink less than boys, the proportion of girls who drink has risen more rapidly than that of boys.

SMOKING: A number of studies focusing on 12- and 13-year-olds, have shown that junior high school is a critical period for the onset of smoking behavior. Very few youth entering seventh grade smoke, but within a few years usage triples. By senior year of high school, 30 percent of young people smoke, and 12½ percent smoke half a pack per day or more—girls outnumber boys.

PEER LEADERSHIP: One particularly promising intervention centers around peer-mediated approaches such as South Carolina’s national award-winning Teen Institutes [see page 57, Moody & McCord]. For example, peer counseling can help in coping with the major transition from elementary to secondary school. Small groups of adolescents can come to understand essential features of human biology and behavior, how to communicate on vital but touchy subjects, and how to understand crucial evidence of the relationship between high-risk behavior and disease and disability. After modest but specific training, and with continuing supervision, adolescents may counsel other adolescents (usually slightly younger) who are in need of health and/or educational access. Such counseling tends to be helpful both to those who give it and those who receive it.

There is abundant evidence that peer leaders who are highly respected and display valued characteristics tend to be influential in persuading young observers to adopt new patterns of behavior or modify old ones. Peer leaders chosen are individuals known to be liked and respected, able to communicate effectively, and committed to healthy life styles. The long-term effects of peer counseling may be more important for the peer leaders—by being useful to others, adolescents can build a more durable basis for self-esteem.

Graduates of most prevention programs have not been followed for sufficient time to establish the degree of permanence of decisions. However, even a delay in health-compromising behavior is significant because an older adolescent may be better prepared intellectually and socially to later make a more mature and considered judgment.

SUMMARY

Research shows that problem behaviors

manifested early tend to persist into later life. Problem drinking does not necessarily commit the young adolescent to a life course of this behavior, but it does alter the probabilities. Conversely, early abstinence is a strong predictor of later healthful behavior. An important observation is that alcohol and other drug use tends to decrease along with smoking decreases.

Young adolescents tend to believe that most of their peers engage in a particular type of behavior whether that is the actual case or not. There is a tendency across populations of adolescents to overestimate such behaviors by a factor of six or eight. In one study, school children estimated that about two-thirds of their peers smoked while the actual figure was about one-tenth.

Adolescents tend to have weak orientation to the future, especially in regard to consequences of risk-taking behavior. College-bound adolescents tend to have a longer view of the future than those who do not pursue college, but in general adolescents think, "It can't happen to me," or, "It's so far off that I just can't think about it." They are focused on the here and now. Many youngsters when they think about it have a dismal view of the future. They are doubtful about their own ability to influence events in ways that build toward a rewarding life.

There is not the slightest reason to believe that today's young people are less talented or resourceful than were their predecessors; but if

they are to learn to do more than survive—to flourish and create—treatment, prevention and educational professionals have to understand the circumstances, tasks and obstacles they face better than we do now, and act on the available information.

Physicians can become leaders in the education of their patients by knowing the facts, being a good listener, and getting involved. □

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ONE BIG HAPPY FAMILY AND OTHER MYTHS

N. PETER JOHNSON, Ph.D.*

E. G. (SKIP) RUNGE, JR., B.A., C.A.S.**

People who spent time in alcoholic homes have survival mechanisms which allow them to cope with that environment. When these mechanisms are transferred to the rest of society, they are sometimes considered abnormal. It is important to remember that they are normal responses to an abnormal environment. Such people can find improved outcomes whether the alcoholic improves or not. This paper describes the consequences of association with alcoholism for (a.) children and (b.) others associated with alcoholics, and some means to break the cycle.

Shakespeare, in *The Tempest* states, "What is past is prologue." Childhood experiences help to shape the adult responses. Four factors which appear to be important in the development of healthy adults are strong sense of family, consistency, trust and discipline. Environments which lack one or more of those factors may produce individuals with good self-esteem and personal balance, but more often produce disturbances in personal equilibrium. Alcoholic families, if they remain intact, are often lacking several of these factors.

Professional estimates that five percent of the sons and daughters of alcoholics are being helped are liberal, even though these children may be at quadruple the risk for alcohol¹ and drug problems as well as behavioral, social, and health problems in childhood and adulthood.²

Most will survive their ordeal. Nearly all of them will have physical or psychic scars as a consequence of parental alcoholism. Because of the nature of the disease, most of these children are unable to talk about what went on in their family, nor are they easily able to talk about their loneliness and fear. Many will simply say their parents were "nuts" or use practiced glib phrases to cover up the damage.

Some are model children in school but endure low self-esteem and anxiety in silence. These may later be expressed as mental or emotional problems, or in poor relationships. Others engage in antisocial behavior and other problems in school as a result.

Part of the difficulty in dealing with this group is that, like their parents, they are subject to strong denial, become isolated, or are uneducated about the effects of alcoholism on their lives. In some cases it is the professionals charged with their care, teachers, physicians and others, who are ignorant of the identification and care for such problems. Parents may refuse assistance for the problems of their children for defensive reasons.

These factors can be overcome, especially when the effort is led by a knowledgeable physician—raising awareness to the nature of the difficulties facing daughters and sons of alcoholics.

Approximately 22 million adult Americans have been raised in a home where at least one parent was alcoholic.³ Using that ratio, South Carolina has approximately 264,000 adults who have been affected.

An additional 6.6 million American children under the age of 18 are currently living in alcoholic homes.³ For South Carolina this translates into approximately 75,000 children placed in such jeopardy. Approximately 7,500 children are born to alcoholic parents in South Carolina each year.⁴

The South Carolina data may be underestimated because drinkers in our state are among the highest consumers of alcohol in the nation. In all probability the severity of consequences on children and spouses is higher also.

Susceptibility to alcoholism is apparently partially genetic and partially environmental. However, it is not simply the summation of these factors either. Cloninger et al., found that of adoptees whose natural parents had alcohol problems, 25 percent of men and 10 percent of women were endangered by personal alcohol problems. They determined two types of sus-

* Office of Alcohol and Drug Studies, Department of Neuropsychiatry and Behavioral Science, USC School of Medicine, Columbia, S. C. 29208.

** 1107 48th Ave. N., Suite 111, Myrtle Beach, S. C. 29577

ceptibility to alcoholism. The first, "milieu-limited," affects both men and women, but is expressed only in certain postnatal environments. It occurs with higher frequency (76% of men and all of the women) among children of alcoholics than the "male-limited" susceptibility. "Milieu-limited" was considered milder and usually did not require extensive treatment. For some males, raised in adoptive homes with low occupational supports, hospitalization was more typically required for more severe problems. In the "male-limited" susceptibility, alcohol abuse was nine-fold higher regardless of the nature of adopted parental environment.

Some successes have been achieved in the prevention arena. These often include processes which allow the person to get in touch with healthy and unhealthy parts of their personalities and discovering the "masks" used to hide feelings.

Groups six to nine years old can learn to discuss serious issues through games. "Latency age" children (10 to 12 years old) can learn a great deal through role plays and educational games. Adolescents can focus on alcohol-related issues in a more direct fashion. Some adolescents must first deal with personal alcohol and drug related problems before focussing on resolution of issues to be resolved as children of alcoholics.

Cermak⁵ gives an insightful analogy about two boys, each of whom receive a cut on the back of their right hand. At home one of them has the wound cleaned and dressed and a daily check made on healing and cleanliness. The other boy wipes the wound off on his pants and moves on with no care provided. Even though the wounds were identical in origin and severity, the differences in the healing process (nurturing) produces scars of different types and severities. Thus, children from the same family may experience different degrees of severity of wounding from the same apparent stressors.

The Children of Alcoholics Screen Test (CAST)⁶ provides an estimate of the severity of the wounds of living in an alcoholic family on the developing person (Figure 1). The CAST is scored by adding the number of "Yes" answers (Figure 2). One of its useful functions is to quickly ask a series of questions which the practitioner may then use in focussed discus-

sion with the patient.

Many children and adults from alcoholic homes may be invisible because their coping mechanisms focus on approval seeking, a socially acceptable behavior. However, many others will have behavioral difficulties which will manifest at school and elsewhere so that a high number of persons in the juvenile justice system, court, prison, and mental hospitals are from alcoholic families. Everyone exposed to an alcoholic incurs some level of emotional, spiritual, and physical damage. The sadness is that many adults who were raised in alcoholic families do not recognize the source of their difficulties. They appear in physicians' offices with complaints of malaise, tension, fatigue, or other stress-related problems such as colitis, ulcers, or migraine headaches. They appear in counseling offices as well where often the parental alcoholism is viewed as a minor problem when it is truly a major influence. Because one common ACOA coping style is to use approval-seeking and socially acceptable behavior, ACOAs are often unrecognized.⁷

What can be done for the person, child or adult who has been heavily impacted upon? Obviously changing the environment is a critical first step where possible. Reducing alcohol impact on the family is often accomplished by physical separation of the family from the alcoholic or, treatment for the alcoholism including family therapy. Education for all family members is also important as a means to break family denial, build trust, restore self-esteem, reduce isolation and guilt, and reduce the ambiguity which accompanies association with alcoholic parents. Because these children are prone to alcohol and drug abuse themselves, an explanation of probable consequences is appropriate. To deal with instances of learning disabilities, anxiety, and attempted suicide, address both the family and the person. Psychotherapy may be an adjunct, but developing abstinence in the alcoholic will be far more effective.

For further information contact the South Carolina Association for Children of Alcoholics, P. O. Box 12094, Columbia, S. C. 29211, or the National Association for Children of Alcoholics, 31582 Coast Highway, Suite B, S. Laguna, CA 92677 [(714) 499-3889]. □

FIGURE 1. CHILDREN OF ALCOHOLICS SCREENING TEST (CAST)

Check the answers that best describe your feelings, behavior, and experiences related to a parent, stepparent or guardian's alcohol use.

INSTRUCTIONS: Answer all 30 questions either "Yes" or "No".

YES/NO

QUESTIONS

- _____ Have you ever thought that one of your PARENTS had a DRINKING PROBLEM?
- _____ Have you ever LOST SLEEP because of a parent's drinking?
- _____ Did you ever ENCOURAGE one of your parents to quit drinking?
- _____ Did you ever feel ALONE, SCARED, NERVOUS, ANGRY or FRUSTRATED because a parent wasn't able to stop drinking?
- _____ Did you ever ARGUE or FIGHT with a parent when he or she was drinking?
- _____ Did you ever threaten or RUN AWAY from home because of a parent's drinking?
- _____ Has a parent ever YELLED AT or HIT you or other family members when drinking?
- _____ Have you ever heard your parents FIGHT when one of them was drunk?
- _____ Did you ever PROTECT another family member from a parent who was drinking?
- _____ Did you ever feel like HIDING or EMPTYING a parent's BOTTLE of liquor?
- _____ Do any of your THOUGHTS revolve around a problem drinking parent or DIFFICULTIES ARISE because of his or her drinking?
- _____ Did you ever WISH that a parent would stop drinking?
- _____ Did you ever FEEL RESPONSIBLE for and GUILTY about a parent's drinking?
- _____ Did you ever FEAR that your parents would get DIVORCED due to alcohol misuse?
- _____ Have you ever withdrawn from and AVOIDED OUTSIDE ACTIVITIES and FRIENDS because of embarrassment and shame over a parent's drinking problem?
- _____ Did you ever feel CAUGHT IN THE MIDDLE of an argument or fight between a problem drinking parent and your other parent?
- _____ Did you ever feel that you MADE A PARENT DRINK alcohol?
- _____ Have you ever felt that a problem drinking parent did not really LOVE you?
- _____ Did you ever RESENT a parent's drinking?
- _____ Have you ever worried about a PARENT'S HEALTH because of his or her alcohol use?
- _____ Have you ever been BLAMED for a parent's drinking?
- _____ Did you ever think your father was an alcoholic?
- _____ Did you ever wish your HOME could be more LIKE the homes of your FRIENDS who did not have a parent with a drinking problem?
- _____ Did a parent ever make PROMISES to you that he or she did NOT KEEP because of drinking?
- _____ Did you ever think your mother was an alcoholic?
- _____ Did you ever wish that you could talk to someone who could UNDERSTAND and HELP the alcohol-related problems in your family?
- _____ Did you ever FIGHT with your brothers and sisters about a parent's drinking?
- _____ Did you ever STAY AWAY FROM HOME to avoid the drinking parent or your other parent's reaction to the drinking?
- _____ Have you ever FELT SICK, CRIED,, or had a "KNOT" IN YOUR STOMACH after worrying about a parent's drinking?
- _____ Did you ever TAKE OVER any CHORES OR DUTIES at home that were usually done by a parent before he or she developed a drinking problem?

FIGURE 2. KEY TO CAST TEST. TOTAL “Yes” ANSWERS [1 point each]

POINTS	TEST INDICATIONS
0-3	probably normal family
4 or more	someone in the family has a drinking problem
10 or more	severe dysfunction

Suspect family alcoholism whenever a child presents with
attention deficit disorder
stress-related medical problems
alcohol-related birth defects
incest
neglect
violence, or
exploitation, until proven otherwise.

Children will tend to show some or many of the following:
inability to trust
excessive sense of responsibility
denial of feelings
an extreme need to control.

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“My uncle was the town drunk
—and we lived in Chicago.”

—George Gobel

STAYING OFF THE MERRY GO ROUND: PRESCRIBING HABITS FOR RECOVERING PATIENTS

BRUCE EAMES, M.D.*

For the individual recovering from chemical dependence, the most important rule of thumb with regard to lifestyle is NO MOOD-ALTERING DRUGS. As the keepers of the prescription pads, it follows that we must be aware of the slowly, but surely, growing population of the recovering community. We need to ask those ticklish questions about family history as well as personal history of chemical dependency. We certainly need to be well in tune with the fact that addiction is not to a substance, but rather to the altered state of consciousness which the intake of *many* substances gives, either as a primary result or as a side effect. The list of prescribed medications for the recovering person is considerably longer than the list of medications which can be used with relative impunity. The following is intended to merely highlight the risks of some of the more common drug classes in our current armamentarium.

ALCOHOL-CONTAINING DRUGS

A very high majority of the tonics, tinctures and elixirs available both over the counter as well as by prescription today contain alcohol. The percentage ranges from a minimal 0.5% (1 proof) to a substantial 44% (88 proof) for elixir of terpin hydrate with codeine. Nyquil, for example, has become very popular as a nighttime cold remedy, and no wonder, because the combination of a 50-proof drink with antihistamine is a powerful sedative!

The lower range of alcohol content should represent no real problem, since a certain amount of ethanol is produced in the human gut on a daily basis. The middle and upper ranges, however, present a real threat of covert or overt relapse on the part of the recovering individual. Indeed, I have personally known

patients whose "drug of choice" was either over-the-counter cough syrups or mouthwashes.

The recommendation or prescription of such drugs represents an even greater threat to the person who is being maintained on disulfiram as an adjunct to a recovery program. Alcohol-disulfiram reactions, particularly in the individual with cardiovascular compromise, may prove fatal.

TRANQUILIZERS

We live in a high stress world, and the recovering person, especially early on, likely has a limited repertoire of non-chemical coping skills. Though such skills are (or should be) part of a chemical dependency treatment program, the situation will not infrequently arise wherein the recovering person presents him/herself to the physician demanding something for "nerves." The minor tranquilizers, most notably the most abused of all classes of drugs in our society, the benzodiazepines, are for the recovering addict an "instant ticket" into relapse. Tolerance will rapidly increase, requiring more and more drug to give the desired result.

As recently as a decade ago, the benzodiazepines were judged to be fairly safe drugs; they rapidly gave the desired sedative or calming effect at low doses and with a high therapeutic index. Not only were they deemed safe, the medical profession at large looked upon them as a virtual panacea for the ills of an emerging technosociety. Relatively few reports of dependence were found in the literature.

Today, the picture is an entirely different one. Volumes have been written on the addictive potential of benzodiazepines; entire conferences have been devoted to the topic. The highest abuse potential seems generally agreed to exist in the recovering population and in those with a positive family history for chem-

* Medical Director, Lifeplus, 211 Century Drive, Suite 200A, Greenville, S. C. 29607.

ical dependency. Yet, this group continues to be the most widely prescribed class of drugs in the country.

Even under the most closely monitored conditions, the idea of "chemical coping" is a very dangerous one, for isn't that exactly what active addiction is all about? The prescription of any tranquilizing drugs for recovering patients, even over-the-counter drugs such as diphenhydramine compounds, must be looked upon with a very jaundiced eye.

ANALGESICS

Through the tetrahydro isoquinolone (THIQ) link, one may look upon the human brain as unable to differentiate alcohol from narcotics. Thus, narcotic drugs must be used in a very limited fashion for recovering people and under strict controls. Medications for severe pain should not be withheld from the alcoholic or addict; indeed, due to the rapid redevelopment of tolerance, higher than normal doses may be necessary for pain relief if more than a couple of days of drug is required.

The administration of narcotics in particular must be very time-limited, with an awareness of the potential need for detoxification. Ideally, the patient should be in hospital for at least 48 hours narcotic-free prior to discharge, and support from other recovering people is to be highly recommended.

The outpatient use of oral narcotics is generally to be condemned in recovering patients with the ready availability of nonsteroidal anti-inflammatory preparations. If such medications are judged necessary, they should probably be dispensed into the care of a responsible party other than the patient.

STIMULANTS

With the probable exception of narcolepsy, there is no use for stimulant drugs in the recovering population, and perhaps nothing for the population in general. Appetite suppressant drugs are deemed generally effective for only approximately a two-week period and thus must be highly questioned as part of a weight loss program.

The use of methylphenidate in hyperactive children deserves special mention, though it must be brief. Although there are indeed children in need of this drug in order to be able to

function, the diagnosis of hyperactivity has become almost vogue in some circles. One cannot help but question the frequency of referral of school children by teachers and counselors for methylphenidate treatment. Are these referrals resulting from pediatric psychopathology, parental dysfunction, or perhaps teacher ineffectiveness? Particularly in children of recovering (or non-) parents, who seem to represent a high risk population for eventual development of chemical dependency, the use of methylphenidate is fraught with risk. Such a child may merely have his addiction, heretofore latent, kicked into full activity at a much earlier age as a result.

SEDATIVE-HYPNOTICS

In the last several years, the use of barbiturates has fallen off considerably, though certainly not disappeared. However, multiple barbiturate-containing medications, often combinations with anti-inflammatory drugs, are still very widely prescribed. As drugs with a well-proven high potential for misuse, neither the barbiturates nor the other sedative hypnotics should be prescribed for the chemically dependent person in recovery.

As with the benzodiazepines, extreme caution should be exercised in prescribing this class of drugs for people with an identifiable family history of chemical dependency. With the genetic predisposition for the disorder so well documented, the elicitation of a family history should always include chemical dependency.

Since the primary indication for this group of medications is the induction of sleep, we are well advised to search for the origin of the sleep disruption, usually an unresolved emotional conflict, rather than seriously compound the problem by treating it as the primary diagnosis rather than a symptom.

DUAL-DIAGNOSIS

There are patients with coexistent psychiatric disorders and chemical dependency. Certainly there is no mutual exclusivity to either disease type. In recent years, more attention has been directed toward the problem of the truly dual-diagnosis patient. Historically and tragically, patients have been advised or admonished by the recovering community that

sobriety meant living totally chemically free. This has been ultimately life-saving for the purely chemically dependent person who through the denial system insisted on the need for psychotropic agents. For the dual-diagnosis patient, however, this advice has resulted in suicide, overt psychotic breaks and many other avoidable tragic events. Such individuals will need to be maintained on appropriate therapeutic medications in order to be able to function in a recovery program. For example, the schizophrenic will likely require maintenance phenothiazine medication in order to remain functional. Likewise, the bipolar depressive may well require lithium and/or antidepressant therapy.

Chemical dependency today is the "great masquerader" that syphilis was at the turn of the century. Just as it taught our predecessors that many different symptom complexes could have syphilis as their cause, so can many medical and psychiatric disorders merely represent symptoms of underlying chemical dependency. Indeed, in the presence of active addiction, it is difficult to make a reliable psychiatric diagnosis. The overt paranoid behavior and ideation of the cocaine or amphetamine addict is not best treated by major tranquilizers—merely by abstinence from the drug of choice. Once the patient is placed in a controlled setting, blatant psychopathology may clear as the brain becomes progressively drug-free. In the true dual-diagnosis patient, dysfunction either does not clear or may rather begin to manifest as time goes on. Such patients can be identified and appropriately treated, if not early in their treatment course, then surely through appropriate long-term followup. As a general rule, major psychotropic medications are deemed to be "safe" drugs for the recovering person who needs them in that they do not seem to trigger a relapse when taken as prescribed.

DETERRENT MEDICATIONS

The two major adjunctive drugs used in treatment and recovery programs are disulfiram and naltrexone. They are "adjunctive" in that they are not substitutes for an active ongoing recovery program with involvement in 12-Step self-help groups. If the only thing between a recovering person and relapse is a daily deterrent pill, sooner or later the pill will fade

from the picture.

Disulfiram has been in clinical use for nearly 40 years and has an amazingly good track record in helping the recovering person avoid taking an impulsive drink. In the first few months of recovery, it can act as an "insurance policy" against alcohol relapse. Even if one stops taking it on a daily basis, at least a week should elapse before alcohol can be ingested without fear of triggering a reaction. It is hoped that the person who impulsively stops the drug will have time to reconsider his decision before it becomes "safe" to drink. Not a completely benign drug, however, the liver chemistries should be intermittently monitored for persistent enzyme elevation which could necessitate discontinuation. The patient must be carefully warned of the potential severity, even fatal nature, of the alcohol-disulfiram reaction.

The newcomer to the field is naltrexone, sold as Trexan. This drug is used as an adjunct in the recovery program of the opiate addict. Unlike disulfiram, when the patient uses opiates in the presence of naltrexone, there is no reaction, including euphoria, due to the blocking action of naltrexone at the opiate receptor, a competitive inhibitor.

The main risk of this drug stems from its primary action. Painful medical emergencies or conditions requiring narcotic drugs present a problem, since administered narcotics will have no effect. In actuality, the blocking effect of the naltrexone can be overridden with high doses of narcotic. The patient must be monitored closely because of the potential for inadvertent overdose as the naltrexone gradually is metabolized (about 72 hours).

Neither of these drugs gives "protection" for drug ingestion other than alcohol or opiates. Thus, the patient who takes them can still find drug euphoria through substances of another pharmacologic class. Given the polydrug nature of the addictive process as we see it today, the importance of an ongoing active recovery program cannot be understated.

The foregoing has been intended to be anything *but* definitive. There are many excellent resources for such information, some of which are listed below. The sole goal has been to focus attention on the mood altering drugs we prescribe and to whom we prescribe them. When in doubt, we need to talk to patients—an art

often lost in these hectic days of medical care delivery. □

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YOCON[®]

YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon[®] is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

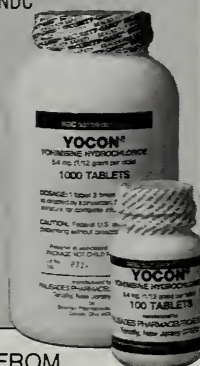
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon[®] 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

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WAS SUPERMAN A JUNKY?

THE FALLACY OF ANABOLIC STEROIDS

N. PETER JOHNSON, Ph.D.*

Testosterone, the most numerous of several male hormones, is so much more abundant and potent than the others that it is typically considered *the* male hormone responsible for male effects. Androgens, steroids like testosterone, are made naturally in the testes and adrenal glands. Testosterone was first synthesized in the laboratory in 1935. Testosterone circulates for 15-30 minutes, binds quickly to target tissues or is degraded into inactive products that are excreted by the liver or gall bladder.

This hormone is responsible for development of primary sexual characteristics; penis, scrotum, and testes, as well as development of secondary sexual characteristics; distribution of body hair, baldness, voice deepness, skin thickness (including increased melanin), acne, nitrogen retention, muscle development, bone growth (rapid growth, but early cessation), calcium retention, increased basal metabolic rate (up to 15%), increased numbers of red blood cells (up to 20%), increased protein metabolism (anabolism) including enzymes, and increased volume of blood and extracellular fluid.

Testosterone is produced by interstitial cells only when interstitial cell stimulating hormone (ICSH) from the anterior pituitary is present. The concentration of testosterone produced is in direct proportion to the concentration of ICSH. Any decrease in ICSH causes a decrease in testosterone. Spermatogenesis is stimulated by FSH and in the absence of FSH, will not proceed. Testosterone must also be secreted simultaneously in small amounts in order for sperm to mature and be effective.

The administration of testosterone derivatives to normal men causes little physiological effect. However, there is a significant reduction in the amount of ICSH and FSH, and a decrease in the amount of ICSH-releasing hormone (IRH) from the hypothalamus. As a

consequence, testicular volume is decreased about 20% and sperm production is decreased by 90% or more. Higher quantities of testosterone cause rapid muscle mass increases which are no more than 3% higher than can be caused by hard work and good nutrition (largely due to an increased extracellular fluid volume), hemoglobin rises, acne, and secretion of estradiol.

Systemic effects include: reduction in the urinary excretion of nitrogen, sodium, potassium and chloride, and induction of a gain in weight lasting typically one to two months. Most muscles probably show some responsiveness to androgens, but typically, the most responsive are the muscles of the pectoral and shoulder region due to increased diameter of muscle fibers and fibrils.

Since androgens have significant effects on muscle mass and on body weight, it was assumed that androgens in pharmacological amounts could promote muscle mass greater than that accomplished by the normal testicular secretions. Investigators believed that the "anabolic" (growth promoting) and "androgenic" (spermatogenesis) functions were separable. The androgenic and anabolic effects are not due to different results of the same hormone, but represent the same action in different tissues. The receptors appear to be the same, the actions upon the receptors appear to be the same. A steroid, to be purely "anabolic," would have to be taken up selectively *only* by muscle tissue and not by gonadal tissue.

Medical usefulness of anabolic steroids is limited. Among the uses are stimulation of red blood cells in the presence of aplastic anemia, treatment of angioneurotic edema, production of growth in young males with growth failure, and breast cancer. It is estimated that there are less than 3 million legitimate prescriptions in the U.S. per year for bona fide medical problems.¹

To date NO ANABOLIC HORMONE
WITHOUT ANDROGENIC EFFECTS HAS

* Office of Alcohol and Drug Studies, Department of Neuropsychiatry and Behavioral Science, USC School of Medicine, Columbia, S. C. 29208.

BEEN FOUND. All supposedly anabolic steroids tested are also androgenic (monkeys, mice, rats, *and* humans), and in appropriate doses it is probable that most anabolic steroids can be used for androgen replacement. For example, methandrostenolone, which has a greater effect on nitrogen balance per unit weight than does methyltestosterone, is a potent androgenic and could be used for replacement therapy on hypogonadal men. After injury or surgery body protein is broken down more rapidly than it is formed, and as a consequence excess nitrogen is excreted in the urine. Anabolic steroids can improve nitrogen balance during the first few days following relatively minor operations in well-nourished subjects, but the decrease in loss is minimal and has not been shown to be of significant therapeutic benefit.

The use of androgenic steroids by athletes in the belief that athletic performance will be improved constitutes a remarkably widespread example of drug abuse. Because of the secrecy surrounding AS use, a great deal of information is based on rumor and hearsay, and the amount of factual data provided to users is typically minimal. Participants may avail themselves of a plethora of pseudoscience such as is found in the *Steroid Users' Handbook* which distorts science to support usage. Weight lifters and body builders began to use steroids in the 1950s and the usage gradually spread into other sports. Unmodified testosterone was generally abandoned in the late 1950s because the drug was so rapidly metabolized when taken orally.

The abuse of these substances at all levels—high school, college, minor and major professional sports—became more widespread, despite the absence of solid evidence of positive effects, and despite the verifiable presence of negative effects. Some observers believe that the use of androgenic steroids is responsible for the breaking of athletic records, but the scientific evidence indicates that the drugs have no extra effect beyond what can be generated by normal testicular secretion. Numerous papers indicate that the use of these agents does not cause a marked increase in strength or athletic performance.² In controlled studies, anabolic steroids do not enhance athletic performance even when phenomenally high doses are used.

The commonly observed increases in body weight are thought to be due to retention of salt and water by the muscles and other tissues.

The concerns about quantity of growth enhancement are almost beside the point when the side effects are considered. There has been no controlled study on women because of the virilizing effect of the drugs on women and young boys.

Although the subject is still controversial, the American College of Sports Medicine² indicates a belief that anabolic-androgenic steroids can cause small increments in strength gains beyond those seen with training and diet alone. In athletic competition the potential for a small increase in strength may be sufficient mental impetus for an athlete to seriously consider steroid use. There have been no studies which traced the clinical condition of athletes over several years of massive steroid use.

The following changes have been related to consumption of anabolic steroids: Increases in hemoglobin, polycythemia, long-term feminization (not the dihydrotestosterones), premature closure of epiphyses, gynecomastia (even small amounts for short times), liver cancer is accelerated and more frequent, virilization of women and young boys, sleep apnea, menstrual difficulties, male pattern baldness prematurely, greatly exaggerated hirsutism, hypertrophy of the clitoris, edema (usually only in the presence of heart or renal problems), peliosis hepatitis (blood filled cysts in the liver), hepatoma, and elimination or impairment of the hormonal regulatory system (ICSH, FSH, IRH, and/or FRH).

In general the younger the person when using an AS, the more likely and profound will be the negative consequences. These described effects are from research on steroids made in reputable laboratories under controlled conditions. Clandestinely produced steroid products have been found to be consistently impure, the contaminants of which often have a worse effect than the main product. Labelling of the product often misrepresents the contents—substitution of inexpensive steroids for more expensive steroids is frequent.

For many of the above reasons, the American Medical Association passed the following resolution in 1988:

Resolution 131—Abuse of Anabolic Steroids

RESOLVED, That the American Medical Association declare that the prescription of anabolic steroids for the enhancement of athletic ability is entirely inappropriate; and be it further

RESOLVED, That the AMA support the development of state legislation or administrative rules to prohibit use of anabolic steroids for the purpose of enhancing athletic ability; and be it further

RESOLVED, That the AMA continue efforts to educate physicians, sports group administrators, coaches, parents and athletes on the dangers of abuse of anabolic steroids.

Resolution 131,³ approved June, 1988, asked the AMA to support the regulation of anabolic steroids and human growth hormone used for purposes of enhancing athletic ability, to urge the classification of these drugs as controlled substances, and to educate the public on the abuse potential of these drugs.

People who take high doses of anabolic steroids are frequently subjected to euphoria and an enhanced sense of well-being. Withdrawal from use is sometimes characterized by complaints of lethargy, irritability, and dysphoria. Continuous users, upon withdrawal report severe depression, feelings of guilt, and impaired sleeping patterns. Hallucinations, paranoid delusions, and hyperaggressivity have also been reported by as many as 10 percent of heavy users. As many as 25 percent of users report symptoms which sound strikingly manic while under the influence of the drug, and 12 percent report depression upon withdrawal.⁴

Several federal officials have described for this author, a network for production, sales and distribution exists which sounds like an almost perfect parallel to the cocaine network described in the media. Approximately 40 percent is apparently diverted from legitimate sources in the US and the remaining 60 percent consists of smuggled, counterfeit, or clandestinely produced drug.⁵ Clandestine laboratories producing some of the "anabolic" steroids have been involved in gang wars over distribution "territory," and general illegal trafficking conditions.

CONCLUSION

Use of steroids for gains in muscle mass is not warranted according to careful analysis of the research to date. Steroid-induced gains in weight can be matched by a weight development program and hard work. The androgenic side effects are sufficiently frequent to suggest that no one should use steroids, or only when the medical complications of steroid use are justified by the most threatening circumstances. Finally, the association with cocaine-like "drug networks" adds one more reason to avoid steroid use. □

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WHAT'D HE SAY? STREET DRUG TERMINOLOGY

N. PETER JOHNSON, Ph.D.*

Street alcohol and drug terms comprise a constantly changing, loose collection of words which have variations based upon the individual's initial exposure to drug use, their departure date (if any) from drug use, geographic variations and modifications, and the severity of symptoms related to the use of the drug(s). These general tendencies are useful to some clinicians and may give additional insights for diagnosis and treatment. A basic understanding of street alcohol and drug terminology, essential to communicate with individuals acquainted with drug use, may facilitate the establishment of accurate findings as well as rapport. The following observations derive from the clinical experiences related to our publication on street alcohol and drug terminology.¹

ENTRY AND DEPARTURE DRUGS

Initial exposure to and use of alcohol and other drugs are often marked by learning and remembering the street terms in vogue at the time. People who entered the drug scene 20 years ago may still use older terms (Table 1).

Persons who have ceased active use of a drug tend to lose currency in their use of terms. As a result, failure to state newer terms may be a recognizable landmark. Such word usage can be diagnostically useful to practitioners. For example, people exposed to marijuana terms of the 60s, learned such terms as "reefer" and "grass." As popularity of marijuana (MJ) grew, names such as "doobie," ostensibly named for the Doobie Brothers rock group, were added. Variations of these names developed during the days when MJ contained one to four percent THC or lower.

More recent users of currently potent MJ varieties are most accustomed to the terms,

"sinsemilla," "sens," and "sezz." Although they recognize the older terms, they seldom use them.

GEOGRAPHY

Terminology distinctions between various U.S. locations are frequent but minor. While garment fashions may take years to migrate from large metropolitan areas to rural areas, drug terms translocate over vast distances within months. For instance, the vernacular about "crack" disseminated in South Carolina within eight months of its impact upon New York. Rapid dissemination of terms may be due to news media coverage. For instance, the free form of cocaine now known as "crack" was called "crack" on the east coast and "rocks" in California at the same time. The media popularized the term "crack." Federal and state agencies contributed "crack" counter-advertisements and have been successful in frightening some people away from it. Unfortunately, those designing the "crack" counter-advertisements failed to mention "rock" and "freebase," chemically identical compounds produced through a different chemical process. This may explain why some users are fearful of "crack" but not "freebase."

TRANSPORTATION EFFECTS

Another major factor which accelerates translocation of terms is the drug transportation process. Dealers, especially gangs of dealers, travel exchanging drugs for cash and other commodities and passing on street terms at the same time. Motorcycle gangs rapidly transport drugs and terms across great distances. Terms which originate at portals of entry (such as Miami, New York, San Diego) travel rapidly toward the central midlands of the U.S. The speed of patient acquisition of such terms may be useful in predicting quantity and frequency of drug use.

* Office of Alcohol and Drug Studies, Department of Neuropsychiatry and Behavioral Science, USC School of Medicine, Columbia, S. C. 29208.

SEVERITY

Increased frequency of use and severity of problems evoke an advanced set of terms. The degree to which drug use has taken over major portions of a person's life may be reflected in words used to describe the drug or its effects.

For example, advanced cocaine users became familiar with the terms, "cocaine blues," "balling" (vaginally implanted cocaine), "coke bugs" (sensation of insects under the skin), and/or "coked out" (undesirable personality changes). The novice user will typically not be aware of these.

At an advanced stage, terms tended to take on further sexual connotation. When a user refers to cocaine by women's names ("Alice"), or men's names ("Charley"), the drug may have taken on added sexual importance, even to the extent of replacing relationships with other people. Table 2 shows a comparison of introductory terms to those of a generally more advanced nature.

With increased symptom severity, drug names may also take on increased hardness ("shit," "hard stuff"), death ("killer"), and aberrant mental health ("45 minute psychosis").

Users typically progress from the so-called "gateway" drugs (alcohol, tobacco, and marijuana) to other drugs. Increased familiarity with a variety of drugs and drug terms often implies added severity. These individuals may search for drugs which can cause stronger effects. For example, "Four Way" and "Pink Wedges" refer to prepared tablets containing LSD, STP, strychnine, and cocaine or amphetamine. Such sophisticated drug use may be precipitated by tolerance to an initial drug.

Term modification occurs because purchasers of drugs repeat what they think they have heard without adequate verification. In a recent teaching trip to Colombia, South America, NPJ interviewed a number of addicted individuals. This group is the original source of the term, "Basuco" (base in Spanish), which refers to the initial cocaine product before purification into street cocaine hydrochloride. Non-Spanish speaking purchasers modified the term to the more familiar, "Bazooka,"

which subsequently became modified to "bubble gum." Entrepreneurial dealers then began selling a product called "double bubble" which falsely purported to be a doubly potent form of "crack" cocaine.

It appears that terms develop over time as a measure of the user's familiarity with the drug. As an example, "Egg" is a term for the ball of smokeable cocaine known widely as "crack." Terms which have sprung from that term in recent months include "scramble," "double yolk," and "rooster." In similar fashion, with the prevalent use of "snow" for cocaine, users modified the original to suit the new form by designing "crack" as "hail" and "sleet." Many terms are simply descriptive of the product form, such as "ball," "boulders," "hard rock," "ice cube," "pebbles," "slab" and "stones."

SUMMARY

Choice of street terms is a clinical expression of both the mental state of the person as well as his/her drug involvement history. A lexicon of drug terms evolves from repetition and frequent use. These are then stored in long-term memory despite drug-induced memory deficits. Broadened experiences usually accompany continued use, including experimentation with esoteric drug combinations such as the "four way" mentioned above. Powerful drug combinations such as "pink wedges" are beyond the imagination of the novice user. Use of these drug terms thus may serve a diagnostic usefulness for the experienced clinician in determining severity of symptoms. The discussion of drug terms may also provide a therapeutic moment. Some relapse prevention may involve dealing with the feelings recalled during recall of a drug term. Practitioner use of drug terms to elicit information from patients has led to a deeper understanding of the breadth and depth of patient use of drugs. □

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TABLE 1

Common Street Terminology for Drugs, a Comparison of Older and Newer Terms

DRUG	OLD TERMINOLOGY (<i>pre-1980</i>)	NEWER TERMINOLOGY
AMPHETAMINES	amp, BAM, BENNY, BLACK BEAUTIES, blue boy, CANDY, CARTWHEELS, CHOCOLATES, COPILOTS, crisscross, cross tops, DEXIES, DOUBLE CROSS, EYE OPENERS, footballs, JELLY BEANS, L.A. (long acting A.), PEP PILLS, powder, SNOW, SPEED, splash, TR-6s, UPPERS, WHITE CROSSES	
AMYL NITRITE (or Isobutyl)		aroma of men, POPPERS, SNAPPERS, toilet water, hard on, JacAroma
BARBITURATE	barb, blue devil, blue dolls, SLEEPER, STUMBLER	PEANUT
1 Pento-barbital	amarilla, nebbies, YELLOW JACKETS	
2 Seco-barbital	devil, red devil, DOWNER, marshmallow reds, pink ladies, red dolls	
3 Seco/Amo-barbital	Christmas trees, double trouble, REDS & BLUES, trees, tueys	
BENZODIAZEPINE	downer, mother's little helpers, tranqs, Vs, Vals, yellow & blues	
COCAINE	all American drug, base, big flake, blow, Charley, coke, Carry Nation, crank, crystal, freebase, eightball, girl, happy dust, heaven, Henry VIII (1/8th gram), her, icing, joy powder, lady, nose candy, nose powder, polvo, sniff, snort, snow, sugar, tootonium, uptown, white, white cloud, white girl, white lady, white nurse, white stuff	basuco, bazooka, Bolivian marching powder, <i>Bubble Gum</i> , <i>Peruvian Flake</i> , PF, pimp, <i>Press</i> , ready-rock, ROCK, Roxanne, <i>Serpico 21</i> , <i>Sevenup</i> , T, teeth, toot-toot, zip, <i>Double Bubble</i> ¹
"CRACK" COCAINE		applejack, BOLO, BOULDERS, BUMP, candy, CRACK, crunch & munch, EGG, gold, grit, hail, <i>Hard Line</i> , HARD ROCK, ice cube, <i>Import</i> , issue, <i>Local</i> , logs, PARLAY, pebbles, READY ROCK, SLAB, sleet, smokin' the devil's dick, stones, sugar block, TENSION, top gun, wave, white sugar

TABLE 1 (continued)

Common Street Terminology for Drugs, a Comparison of Older and Newer Terms

<i>DRUG</i>	<i>OLD TERMINOLOGY (pre-1980)</i>	<i>NEWER TERMINOLOGY</i>
MARIJUANA	Acapulco Gold, Alice, bhang, blowing smoke, boo, bush, cannabis, cannabis sativa, cheap shit, COLOMBIAN, DOOBEE, DOPE, FINE STUFF, funny stuff, GOLD, GOOD SHIT, goofbutt, GRASS, green goddess, HASH, HAY, HERB, INDIAN HAY, JOINT, killer weed (60s), killer weed (80s, MJ+PCP), locoweed, MAUI, Mexican red, Santa Marta, MORNING MISSILE, Panama gold (1), Panama red (1), PARSLEY, pocket rocket, Rasta weed, REEFER, ROPE, shit, smokin dope, STONE, Tai, TEA, THC, TOAK, WACK, yellow submarine, Zacatecas purple	Chicago green, CHRISTMAS TREE, Gainesville green, Illinois green, Jersey green (1), purple haired lady (1), red haired lady (1), SEN (1), sens (1), SESS (1), SIN (1), skunk, stick, Vermont green, Vietnamese black (1), white haired lady
MARIJUANA Cigarette	FATTY, JOINT, NAIL, POCKET ROCKET, REEFER, ROACH, TWISTUM	
HEROIN	brown sugar, China white, crap, dirt, flea powder, garbage, H, Harry, horse, joy powder, powder, quill, shit, speedball (H & C), snow, taste, white horse, white lady, white nurse, white stuff	<i>Climax, F . . . me please, Golden Girl, Rambo, Slime, The Beast, Sweet Lucy's Tit, The Witch, Tootsie Roll (black tar heroin)</i>
LYSERGIC ACID DIETHYLAMIDE (LSD)	acid, black acid, black sunshine, blotter, blue heaven, California sunshine, chocolate chips, conductor, cube, crystal tea, dots, double domes, electric kool aid, haze, LSD, lens, mellow yellow, microdot, Owsley's acid (1), paper, purple haze, Stanley's stuff (1), strawberry fields, sugar, window glass, window pane, yellow sunshine, yellow submarine, zen	<i>The Ghost, Golden Dragon, The Hawk</i>
MESCALINE	buttons, cactus, MESC, MEXC	
METHAMPHET- AMINE	CRANK, CRYSTAL, CRYSTAL METH, quill, SPEED, water, WHITE CROSS, yellow bam	
METHYLENE- DIOXY AMPHETAMINE	love drug, MDA, speed for lovers	

TABLE 1 (continued)

Common Street Terminology for Drugs, a Comparison of Older and Newer Terms

DRUG	OLD TERMINOLOGY (<i>pre-1980</i>)	NEWER TERMINOLOGY
METHYL-METHYLENE-DIOXY-AMPHETAMINE		ecstasy, ICE (smokeable), MDM, MDMA, MMDA, XTC
PHENCYCLIDINE	ANGEL DUST, DOA, HCP, HOG, horse tranquilizer, PCP, peace pill, rocket fuel, WACK, yerba mala (MJ & PCP)	butt naked, HINKLEY, LOVEBOAT, taking a cruise
MISCELLANEOUS	PERKS (Percodan/Percoset)	DILLIES (Dilaudid), CUBES (Demerol), MOTHERS HELPER (any benzodiazepine)
PROVIDERS of drugs	ant, candy man, carrier, cashier, CONNECTION, CONTACT, DEALER, executioner, leader, mover, MULE, PEDDLER, PUSHER, RUNNER, SOURCE, steerer, trigger man	BURRO, cruce

KEY TO ANNOTATIONS

- words in CAPITAL letters are the most common
- (1) purportedly more potent (also all brand names)
- Italics* brand name, packaged, labeled and marketed [e.g., *The Beast*], supposedly pure and potent

“There is no dirtier or deadlier bullet than the illegal drug capsule.”

—*U. S. Delegate to the United Nations, George Bush, 1971*

TABLE 2

Comparative Terms from Persons in Introductory Phase of Use with Those from Persons Later in Addiction

<i>DRUG</i>	<i>INTRODUCTORY TERMS COMMON FOR BEGINNERS</i>	<i>TERMS OF GENERALLY GREATER SEVERITY</i>
MARIJUANA	<p>charge, dry high, fine stuff, funny stuff, giggle smoke, good stuff, humble weed, joy stick, joy weed, kidstuff, lamb's breath, light stuff, Maui wowie (1), merry weaver, parsley, righteous bush, sweet mary jane, tea, utopiate, yerba buena ("good weed"), yellow submarine</p> <p>(1)—potent variety, typically indicates greater usage experiences</p>	<p>Acapulco gold (1), Canadian black, Colorado cocktail, Colombian gold (1), Columbus black (1), cucaracha, Doobie, fuma d'Angola, goofball, green goddess, kick, la mona de Santa Marta, Mexican shit, purple haired lady (1), red haired lady, rough stuff, shit, Vietnamese black (1), viper's weed, wacky weed, white haired lady, (MJ dipped in formaldehyde), Yemen, yerba mala ("bad weed"), <i>also</i> A-bomb (MJ & heroin), chips (MJ & PCP), dymanite (MJ & heroin), killer weed (MJ & PCP), orange juice (MJ & opium), supergrass (MJ & PCP), wack (MJ & PCP)</p>
COCAINE	<p>all American drug, bowl of smoke, friendly powder, frisky powder, gift-of-the-sun-god, gold dust, happy dust, happy powder, happy trails, heaven dust, joy powder, Mercedes of drugs, nose candy, paradise, rich man's aspirin, rich man's drug, rich man's speed, zip, zoom</p>	<p>Bernice, bumper cloud, caught in a snowstorm, Corrine, dreamer, eight track (2½ gm. inject), hard stuff, jack off, lady love, pimp, pimps' drug, Roxanne, white girl, white goddess, white lady, white nurse</p> <p><i>also</i></p> <p>4-way, orange cupcakes, or pink wedges (all mean LSD, STP, cocaine or other stimulant, and strychnine in tablet form).</p>

SUNSHINE ON PALMETTO MOONSHINE*

HAROLD W. MOODY, M.D.

WILLIAM J. McCORD, M.S.P.H.

For years, the myths and misconceptions surrounding the disease of alcoholism allowed society to ignore its responsibility for providing effective treatment services to those in need. Although Alcoholics Anonymous had been active for quite some time in combating the public's ignorance about this issue, there was no formal treatment available in South Carolina until the late 1950s when the General Assembly made an initial state investment of \$20,000.

Despite this relatively modest beginning, South Carolina has developed and refined a comprehensive statewide community-based system specifically designed to deal with problems of alcohol and other drug use. During fiscal year 1989, this system provided intervention and/or treatment services to 51,841 individuals, or approximately 1.5 percent of the state's total population, and coordinated 7,903 different prevention activities impacting 416,773 individuals in the state.

Although South Carolina's system is predominantly non-medical, it evolved as the result of medical leadership, particularly that of Walter R. Mead, M.D., a family physician from Florence, who served on a special committee created by the General Assembly in 1956 to study the feasibility of establishing the state's first inpatient treatment facility. Dr. Mead also served as the first chairman of the governing board of the South Carolina Alcoholic Center, the predecessor to the South Carolina Commission on Alcohol and Drug Abuse (SCCADA), created in 1957 as the result of the findings of the special committee. Through the years, the continuity of this medical leadership has proved instrumental to the state's system.

The earliest proponents of South Carolina's system recognized the need for services at the local level, because this is precisely where problems develop. Hence, services are avail-

able today through a statewide network of 37 county alcohol and drug abuse authorities serving all 46 counties.

This community-based system had its inception in 1972 when the General Assembly earmarked tax revenues generated from the sale of the minibottle (the method used to dispense distilled spirits in this state) to be provided to counties on a per capita basis for alcohol and other drug programming. The next year, the General Assembly required each county to designate a single authority to plan and implement these local programs. Since then, the flexibility of this system has allowed it to meet the needs of each community in the least restrictive and most responsive ways possible.

Although early programming efforts focused on the need for public education, those efforts were concerned primarily with removing the stigma associated with alcoholism and other addictive diseases. Consequently, they were concerned more with the alcoholic or drug addict as an individual sufferer rather than with the broader implications of the use of alcohol or other drugs on the family or on society. Today, however, South Carolina is in the forefront of programming that uses social policies to affect changes in the way a community deals with alcohol and other drugs. In 1981, for example, the SCCADA initiated and hosted the first in a series of national conferences to examine a variety of alcohol-related policy issues, such as advertising, pricing, labeling, taxation and other measures that can positively impact the public's health and safety.

The programming philosophy of the state system recognizes that an individual's relationship with alcohol and other drugs can range from abstinent but affected by the use of others; to use; to abuse; to addiction. At each of these four stages, there are specific actions that can prevent individuals from advancing to the next level or assist those who are already experiencing problems to return to healthy, produc-

* From the S. C. Commission on Alcohol and Drug Abuse, 3700 Forest Drive, Columbia, S. C. 29204.

tive lifestyles. For this reason, a wide range of primary prevention, intervention and treatment strategies work to achieve these goals, and in the process, strive to reduce both the supply of and the demand for alcohol and other drugs.

Through information, education, alternative activities and social policies, primary prevention services target specific high-risk groups and the general public. These efforts are designed to: (1) promote overall health and wellness; (2) delay the age of onset of first use of alcohol and other drugs or avoid onset altogether; and (3) avoid the development of problems related to the use of alcohol and other drugs.

Intervention programming is implemented in collaboration with other existing social systems, such as the workplace, the school and the criminal justice system, and provides early detection and remedial action among individuals who are already experiencing problems related to their use of alcohol and/or other drugs. Specific programs include the School Intervention Program, the Alcohol and Drug Safety Action Program and the Offender Based Intervention Programs.

Inpatient and outpatient treatment services are aimed at arresting the disabling effects of the use of or addiction to alcohol and/or other drugs and to prevent their recurrence and further disability. Specific services offered through county alcohol and drug abuse authorities include individual, group and family counseling; intensive outpatient treatment; crisis intervention; involuntary commitment; detoxification; halfway houses; residential family care; transitional care facilities; and aftercare. Referrals are made to other public and private treatment facilities as well.

In addition to these comprehensive services, the SCCADA has developed and implemented numerous other projects targeting specific groups including the state's medical community. The Career Teacher Program, initiated in 1980, is jointly supported by the SCCADA and the University of South Carolina School of Medicine. This program in the Department of Neuropsychiatry and Behavioral Sciences develops and incorporates information on alcohol and other drug abuse diagnosis, prevention, referral and treatment into the curricu-

lum and other experiences for medical students and residents. The Family Practice Residency Program, funded by the agency in cooperation with the Department of Family Practice of the Medical University of South Carolina (MUSC), is staffed by a full-time certified addictions specialist who has incorporated alcohol and other drug related training into the curriculum for family practice residents. Through this program, the residents are trained in the detection and diagnosis of alcohol and other drug related problems. A program with similar goals provides relevant training activities to MUSC's pediatric residents. In addition, similar efforts are underway in the family medicine programs at Richland Memorial Hospital, Anderson Memorial Hospital and Spartanburg Regional Medical Center.

South Carolina's system for alcohol and other drug programming has an annual total expenditure of approximately \$23 million for services provided at the state and local levels. A model for the nation, this system was named the "Outstanding National Program for 1988" by the Alcohol and Drug Problems Association of North America. This award recognized the system for its statewide prevention network and for the contributions the network has made to prevention programming at the national level. □

"My piano player has been with me for 20 years. I didn't know he was an alcoholic until one morning last week he showed up sober."

—Joe E. Lewis



GCMIA

NEWSLETTER

JANUARY 1990

MEDICARE UPDATE

New Medicare Part B Provider Number

A Medicare Online Bulletin dated December 1989 has been mailed which explains the new Medicare Part B provider number and how it affects your practice. Medicare has established a hotline for questions about these new provider numbers: 754-1968, ext. 5437 in Columbia (or you may contact your Medicare service center). You must use this new number for hard copy claims submitted on or after March 1 (March 5 for electronic claims submission). Do not use this new number prior to March 1.

Medicare Computer System Postponed

Implementation of the new Medicare computer system has been postponed until March.

Participating/Nonparticipating Status Changes

You have until April 1 to make any changes in your participating/nonparticipating status. An official Medicare package has not yet been provided by HCFA; this will be mailed to you from Medicare when available. Your 1990 MAAC profile will also be mailed at a later date since any changes in this will not be effective until April 1990. The two percent Graham-Rudman-Hollings reduction in payment will continue until April 1.

MEDICAID UPDATE

Error Codes for Line-Item Rejections

To further assist physicians in gaining timely reimbursement for services rendered to their patients on Medicaid, the Health and Human Services Finance Commission has made a change on its explanation of benefits or remittance advice form. Physician representatives at HHSFC when manually looking over claims which either have been rejected once or have been suspended for review occasionally find it necessary to reject a certain line of a claim to allow the balance of the claim to be paid.

In the past, there was no way to indicate to the physician the reason for rejecting the line. Effective in November 1989, the error code which describes the reason for the line item rejection

began appearing on the physician's remittance advice form.

A description of all error codes can be found in the physician's Medicaid manual in Chapter 400. Physicians may refile for the rejected line on a new claim if corrections can be made. Physician representatives at HHSFC can assist in resolving any billing problems. Your representative can be reached at 253-6134 in Columbia. Most errors are due to an incorrect patient or physician Medicaid number. Remember your Medicaid provider number is different from your Medicare provider number.

Instructions for Filing Claims for Patients Covered by Medicaid and a Private Insurance Policy

Recipients' Medicaid cards indicate if the patient has health insurance in addition to Medicaid. Other insurance should be billed prior to billing Medicaid. If the other company denies payment, you may then bill Medicaid. Follow the instructions in your Medicaid manual about including information with regard to this other insurance company's denial of your claim.

The SCMA is working closely with Medicaid to lessen the burden of this requirement on SC physicians.

PRO UPDATE

Preassigned Number Effective for all Non-elective Cases for Which Prior Approval is Required but not Obtained

The current Medicare PRO review program in SC mandates that all elective procedures requiring preadmission/preprocedure approval be assigned a seven-digit number which must be included on the Medicare claim form submitted by the hospital, ASC, and/or physician as applicable.

All non-elective (urgent/emergency) cases for which prior approval is not obtained have been reviewed on a postdischarge, prepayment basis in order to avoid interference with the provision of appropriate and timely medical care for Medicare beneficiaries. This postdischarge/prepayment requirement has posed an inconvenience for all practitioners and providers. The Health Care Financing Administration (HCFA) has responded to these concerns by allowing review of these non-elective cases on a postpayment basis.

Medical Review of North Carolina (MRNC) is authorizing the use of a special number (777777) for these non-elective cases. Elective procedures continue to require prior approval, and claims for elective procedures are not allowed to use this special number. All claims filed using the preassigned 777777 will be selected for retrospective review with particular emphasis on validating that the procedure was performed on a non-elective basis.

Requests for prior approval and questions about this change should be directed to CMR prior approval staff at 800-331-4690.

DHEC AWARDS FOR AIDS REPORTING

At the SC HIV/AIDS Task Force Meeting on December 6, DHEC Commissioner Michael Jarrett presented awards to eight infectious disease physicians who had reported at least 20 AIDS cases since 1981, had consistently reported cases over time and had provided patient care to the greatest proportion of persons. Dr. Bosko Postic from Columbia, Drs. David W. Potts and Ludwig Lettau from Greenville, Dr. Peter Dandalides from Spartanburg, Dr. Rick Ervin from Florence and Drs. Joseph John, Timothy West and Preston Holley from Charleston have cared for and reported a combined total of at least 304 AIDS cases or 40 percent of the AIDS Registry through October 1989. Three years ago in December there were 105 AIDS cases reported to DHEC; there are now 809 AIDS cases through November 1989.

Mr. Jarrett emphasized the critical importance of reporting AIDS cases for epidemiological information and for federal funding of prevention and surveillance programs, the state's Medicaid and AZT programs, and for projecting the number of AIDS cases in SC in the future. The AZT program, for example, was recently again funded by Congress at a higher rate than the first award based on the total number of AIDS cases in the state.

Physicians treating patients with HIV infection and AIDS may call DHEC AIDS surveillance in Columbia at 737-4110 for information about reporting.

CHANGES IN LAWS REGARDING DISPENSING OR PRESCRIBING DRUGS

You should have received a December newsletter from the State Board of Medical Examiners which summarized current federal and/or state laws regarding dispensing (including "samples") and prescribing drugs.

Please review this newsletter carefully. Since these laws directly affect your practice, you should be aware of the requirements of the drug laws including record-keeping requirements, labeling requirements when dispensing, inventory and other legal requirements, who may dispense, and penalties for violation.

PATIENTS WHO SHOULD NOT DRIVE AUTOMOBILES

Physicians treating patients for illnesses resulting in temporary or permanent impairments indicating the patient should not drive an automobile are not required to report this disability to the SC Department of Highways and Public Transportation.

It is a good idea, however, to get patients to acknowledge in writing that you have informed them they should not drive because

the law does place a duty on patients to inform the highway department of their impairment when applying for a license or renewing their current license.

PATIENT ACCESS TO MEDICAL RECORDS

Paragraph 7.02 of the Current Opinions of the Council on Ethical and Judicial Affairs of the American Medical Association states that a physician should provide a copy of the patient's chart to the patient, another physician or other person designated by the patient when the patient makes such a request for a copy of the record.

CHARGES FOR COPIES OF MEDICAL RECORDS

Current SC law allows a charge of 50 cents per page for copies of medical records, with a minimum charge allowed of \$10.00.

However, in cases dealing with Workers' Compensation, a charge of 50 cents per page is authorized but a minimum charge of only \$5.00 is allowed. The SCMA is currently sponsoring legislation to raise this minimum fee to \$10.00 as allowed elsewhere in the law.

SC REPORTABLE CONDITIONS FOR 1990

You should have received from DHEC the official SC list of reportable conditions for 1990. Please refer to the October 1989 edition of "EPI-NOTES" for information on reportable conditions, types of reporting required and an update on total reported cases of selected diseases for a five-year median, by county, ending October 7, 1989. For a copy of "EPI-NOTES" or additional information, contact Jeffery L. Jones, MD, MPH, Editor, 737-4165 in Columbia.

CAPSULES

Hunter R. Stokes, MD, Florence, has been elected secretary for representation of the American Academy of Ophthalmology.

SCMA NEWSLETTER
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South Carolina Medical Association
Contributions welcomed.
Melanie Kohn, Editor
Joy Drennen, Assistant Editor
798-6207, in Columbia

South Carolina's Alcohol and Drug Abuse System

**Meeting the community's needs in prevention,
early intervention and treatment of alcohol and other
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For services in your county, call:

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or

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EDUCATIONAL FACTORS IN SUBSTANCE ABUSE FOR PHYSICIANS

N. PETER JOHNSON, Ph.D.*

ANTHONY B. LINDSAY, M.D.**

MARTHA TUMBLIN, M.A.***

Current techniques used in medical education are very useful for practicing physicians to upgrade their knowledge and skills with a minimum investment of money and time.

BASIC PREMISES

Six basic premises are enumerated below:

- a. A knowledgeable and concerned administration will engender a positive attitude by students even in the face of adversity.
- b. Students should have regular exposure to healthy recovering individuals in order to believe that people can get well from addictions—exposure only to people who do not get well leaves a lasting impression of impending failure and prolongs the number of unresolved cases which were untreated or unsuccessfully treated.
- c. Alcoholism and drug abuse are treatable illnesses, and we do it all the time successfully.
- d. Education reduces severity of problems (e.g., Junior League survey showed that education possibly reduces the severity consequences of growing up in a family with alcoholism).
- e. We probably can't change the majority of graduates, but we can modify the behaviors of future physicians. (AMA survey of practicing physicians shows that the most recent graduates are least likely to be represented among overprescribers.) Burfield, personal communication, 1988.
- f. Faculty who are knowledgeable and interested.
- g. The earlier problems are recognized, the

more positive is the possible outcome, and the less the severity of the problems may be—the converse is that failure to deal with problems early is not a sign of sound diagnostic skills and does not contribute positively to health care.

The following are some types of educational endeavors which have been implemented to improve the education of physicians at the University of South Carolina (and elsewhere):

1. DIDACTICS

Lectures are the least likely mode to change attitudes, skills and behaviors. The constraints of time necessitate that some information must be presented in lecture. The following lectures are delivered didactically on alcohol and drug abuse:

- a. Physician prescribing practices.
- b. Drug deceptions, and types of scams in current use.
- c. Signs and symptoms of alcohol and drug use (physical diagnosis taught by the school role model physician).
- d. Denial, minimization, repression, other, on the part of patient and physician.
- e. Physician and student alcohol and drug use.
- f. Impact of addiction in the family on future outcomes (including upon medical students from alcoholic families).

These are taught in several courses which assist students in understanding that treatment of alcohol and drug problems belongs in all medical disciplines. The experiences of previous alcohol and drug educators taught that motivated individuals in any field can intervene effectively with developing alcoholics and make positive differences. Alcoholics present to physicians in all types of practices and therefore diagnosis must occur in all sets of circumstances. We currently present information in the clinical medicine (clinical presentations); family medicine (alcohol and family

* Office of Alcohol and Drug Studies, Department of Neuropsychiatry and Behavioral Science, School of Medicine, University of South Carolina, Columbia, S. C. 29208.

** Department of Psychiatry, School of Medicine, University of North Carolina, Durham, N. C.

*** Department of Family Medicine, Medical University of South Carolina, Charleston, S. C. 29425.

issues); pharmacology (alcohol and drug abuse); physiology (alcohol and drug abuse); and psychiatry (interviewing techniques and behavioral aspects).

2. PERSONAL EXPERIENCE

Personal experience is conducive to enhanced learning—therefore we try to create circumstances around which personal experiences may occur.

- a. We send students to the South Carolina School of Alcohol and Drug Studies—one week of work with 20 medical students from seven southeastern states (11 medical schools).
- b. Psychiatry rotation—we provide a “hands-on” training on “interviewing skills” using recovering counselors as mock patients (AHRN, 1989).
- c. Pediatric rotation—“interviewing skills” are taught in a similar fashion by working with recovering adolescents.
- d. Freshman and sophomore electives in inpatient and outpatient experience with addictions treatment.
- e. Preventive medicine elective seminar to addictions center—direct participation in treatment groups has been increased from 20 the first year to 40 this year.
- f. Senior credit elective dealing with advanced inpatient addictions treatment.
- g. Voluntarily personalized experiences have been created for students to educate themselves—e.g. make a special arrangement for one student, interested in pediatrics, to have three weeks of participation in an adolescent addictions treatment group.

3. ADMINISTRATIVE

We believe some benefits of the school process are provided by the following:

- a. An alcohol and drug person to whom students have continuous non-disciplinary access, as well as resource persons throughout the University and elsewhere.
- b. Employment of recovering faculty who can serve to guide students who may be developing alcohol and drug problems themselves or have family members who have recovered.
- c. Key administrators who are supportive

of addictions education, research, and treatment.

4. RESEARCH

Increased learning occurs when faculty and students are involved in research. While the details are eventually left behind the repetitive activities and the synthetic analytic requirements of research may cause a great deal of conceptual learning to occur.

- a. Ongoing research on women and alcoholism has resulted in a presentation which involved a medical student as an interviewer and in the publication of a professional paper on the subject.
- b. Medical students serve as data coders for the computer analysis which allows them to learn some of the material.

5. SUPPORT OF STUDENT ACTIVITIES

Students who become activists for particular causes are likely to continue those activities after graduation:

- a. The Medical Student Association (Peer Advocacy Committee) provides speakers and small workshops, as well as non-administrative interventions for students in apparent jeopardy.
- b. The committee chairpersons also meet four times each year with the South Carolina Medical Association Physicians Advocacy and Assistance Committee.

We present a videotape produced by the American Medical Association Informal Steering Committee on Prescription Drug Abuse to students on electives as well as all third-year Family Medicine residents.

Grand rounds in family medicine, psychiatry and pediatrics, one videoconference per year as well as co-sponsorship of numerous alcohol and drug educational events are other educational modalities. Students are invited free to these, and free copies of the most recent editions of the *Dictionary of Street Alcohol and Drug Terms* and the Physician's Five Minute Guide to Alcohol and Drug Abuse are distributed. Persistent enhancement of alcohol and drug education results in positive increases in curricular time allocation, faculty interest, scholarly work and ultimately we expect in the quality of treatment provided to patients. □

WHY BOTHER? REASONS FOR ACTION

GUEST EDITORS: GREGORY L. PHELPS, M.D., M.P.H.
N. PETER JOHNSON, Ph.D.

Alcoholism has been called the number one untreatable treatable illness. Physicians are accustomed to seeing mostly end-stage patients, often only in the emergency room. Both physicians and patients have given up on treatment or referral, assuming that the effort is futile. The situation is somewhat analogous to being able to only diagnose diabetics when they are blind double amputees in diabetic coma.

The key point is physician management in the treatment of alcoholism must be the early diagnosis and early treatment before the walls of denial become too thick to breach. Studies have shown that early intervention on patients while they still have a job is successful 80 to 85 percent of the time. Yet screening for alcoholism, a disease one and a half times more common than diabetes, is rarely done in an effective manner.

In the state of South Carolina, treatment can be mandated; patients can be committed for the diagnosis of alcoholism and yet less than one half of the physicians have ever assisted in the commitment of an alcoholic patient. A small segment (9%) of Family Physicians have committed six or more!

There is also some evolving malpractice liability in alcoholism. Physicians have been sued both for believing a patient was intoxicated when he or she was not and for failing to address and identify a patient who was an alcoholic and suffered from an alcohol/medication interaction and other problems.

Alcoholism and other drug abuse reaps an unparalleled harvest of pain and suffering and death not only to the patient but to families and other innocent bystanders. We hope this issue of the SCMA *Journal* will help to pique interest and improve diagnosis and referral of this crippling complex of diseases. We have here a bibliography of additional resources geared to primary care physicians and elsewhere a listing of state agencies to further assist

in identification, treatment and referral of these patients. □

ACKNOWLEDGEMENT

The Guest Editors are grateful to Martin F. Zwerling, M.D., who provided the quotations used throughout this special issue.

RESOURCES FOR PHYSICIANS

Alcoholism: A Guide for the Primary Care Physician. H. N. Barnes, M.D. Aronson, T. L. Delbanco. Springer-Verlag, 1987.

Wrong Diagnosis Wrong Treatment: The Plight of the Alcoholic in America. Joseph Beasley. Creative Infomatics, 1987.

The Alcoholic Patient Diagnosis and Management. M. E. Chafetz. Medical Economics, 1987.

Single copies of the following are available free of charge from the National Clearinghouse for Alcohol and Drug Information, PO Box 2345, Rockville 20852 (301) 468-2600.

Alcohol and Health. Sixth Special Report to Congress.

Drugs and Alcohol Abuse—Implications for Treatment.

The White House Conference for a Drug Free America: Final Report (1988).

Selected Statistics on Alcohol and Alcoholism (1987).

Clinicians Reading List: General Reference and Literature (1987).

Clinicians Reading List: Specific Drugs Other Than Alcohol (1987).

Big Lies Promote Cocaine and Crack Use (1988). Alcohol and Birth Defects: The Fetal Alcohol Syndrome and Related Disorders (1987).

Alcohol and Birth Defects: The Fetal Alcohol Syndrome and Related Disorders (1987).

Alcohol Hepatitis: A Practical Guide for Physicians and Other Health Care Professionals (1988).

Alcohol Alert: Methadone Maintenance and Patients in Alcoholism Treatment (1988).

Alcohol Alert: Alcohol and Aging (1988).

What You Can Do About Drug Abuse in America (1988).



THE INTERIM MEETING OF THE AMA REPORT OF THE SCMA DELEGATION

JOHN C. HAWK, JR., M.D.*

A slight tremor, measured as 4.6 on the Richter scale, shook the Coral Ballroom of the Hilton Hawaiian Village on Tuesday, December 5th, but was passed off initially as due to rumbling vehicles in the subjacent parking garage. In any case, it was not nearly as earth shaking as what many delegates to the AMA Interim Meeting (Honolulu, December 3-6, 1989) had expected to occur in Reference Committee F and on the floor of the House in regard to revelations in Chicago media in mid-October of questionable fiscal actions relating to two senior AMA executives.

The delegates had received in advance Report QQ of the Board, describing the events which go back to October 1987, and delineating the corrective actions taken by the Board. These include retaining independent legal counsel, Jenner and Block, to conduct a thorough investigation; restructuring of Board Committees to strengthen Board oversight and to define limitation of EVP authority; and retaining new outside auditors for 1990. But the delegates had also received resolutions from the Illinois, District of Columbia and Delaware delegations, calling for strong measures to resolve fiscal problems of the AMA. Also, on arrival we received Late Resolution A from the Washington State delegation asking the AMA Board to consider placing EVP James A. Sammons, M.D., on administrative leave until the Board's investigation is complete.

At the opening session Sunday morning, the issue was addressed "head-on" in the supplementary reports of Dr. John J. Ring, Chairman of the Board, and Dr. Sammons himself. Dr. Ring referred to the actions taken by the Board and

*30 Bee Street, Charleston, SC 29403.

promised to complete the investigation and to make a full report to the House as quickly as possible. He stated: "I am determined that no chairman that succeeds me will ever be faced with the frustrations I have experienced in the past four or five weeks. It will not happen again."

Dr. Sammons alluded to his association with the House in various capacities for over 30 years. He assured the House that the American Health Care System provides the highest level of medical care known anywhere in the world, and that we as physicians can justifiably be proud of it. He affirmed that the AMA continues to be an effective force in Washington, while freely admitting that not all desired goals have been attained.

He also cited the important influence of the AMA "outside of the Washington beltway," and especially in the reporting of medical discoveries and breakthroughs and in medical education.

Then in a personal vein, he admitted that he was wrong in the manner in which he carried out the decisions in regard to the two senior AMA executives, and he took full responsibility for these decisions. He also expressed his support for the changes recommended by the Board.

He said, "In retrospect, I clearly recognize that I failed to follow appropriate procedures in these two incidents. There is no question about that whatsoever." He then stated that he had made many difficult decisions in his 15 years as EVP and cited many of the AMA's accomplishments in that period. Finally, he expressed hope that "on balance my contributions outweigh my mistakes."

Shortly thereafter, the Committee on Rules and Order of Business which reviews all Late Resolutions recommended acceptance of Late Resolution A, mentioned earlier. But the House, responding to the statements of a number of

speakers, voted to reject consideration of the resolution. From this point on it was a foregone conclusion that the House would accept the Board's Report QQ and await the Board's further action, and indeed this did occur.

Both the Board and Dr. Sammons announced his intention to retire at the expiration of his current contract, March 31, 1991. He intends to give up the day-to-day management of the AMA as of December 31, 1990 and spend the following three months making a smooth transition for his successor.

This important item is reported in much greater detail in the December 15th issue of the AM News and also in the December 22/29 issue of JAMA (P.3467) in the article by Dennis L. Breo. A large part of this issue of the AM News is devoted to detailed reports of the Interim Meeting. In the remainder of my report, I will be very brief and will give page references to the December 15th AM News so that anyone interested may readily find a more detailed account of any specific item.

OVERVIEW

All told, 266 items of business were considered by the House, including 187 resolutions and 79 Board and Council reports. Of the 435 delegates seated, 347 represented state and territorial medical associations, 78 national medical specialty societies, and 10 delegates represented the five special sections and five governmental services.

PRESIDENT'S ADDRESS (P.3)

The theme of Dr. Alan R. Nelson's "state of the union" address was "The AMA Works." He cited an impressive list of accomplishments as an answer to the oft-heard question "What does the AMA do for me?" He included the defeat of mandatory assignment four times in the past three Congresses; the fact that the AMA is the world's largest publisher of scientific information; the AMA's

commitment to NIH funding to protect the stability and integrity of medical research in the US; the AMA's considerable activities in communicating medicine's story to the public; and the defeat of expenditure targets in the budget bill. Dr. Nelson urged the nation's physicians to get involved and to join the AMA as "your best investment in the future."

ADDRESS OF US SECRETARY OF EDUCATION (P.39)

Lauro F. Cavazos, Ph.D., US Secretary of Education, addressed the opening session of the House of Delegates. He is a former medical school dean, and declared that "our medical schools are at the forefront of curricular innovation and continue to attract the finest students." He called upon the delegates for assistance in improving and restructuring our nation's educational system, especially at the elementary and secondary school levels.

He emphasized the importance of early childhood education, declared that safe, drug free schools must be provided for all America's children, and urged physician support for teachers.

AIDS (P. 8, 25, 32)

The House received a major report on the present status of the medical, legal, and social implications of AIDS and HIV infection. There was sharp debate on contact tracing and notification of sexual and needle-sharing partners, which some feared would contribute to "driving this problem underground." It was of significance that AIDS expert, Paul Volberding, M.D., received AMA's 1989 AMA-ERF Award for health education.

DISCRIMINATION ON THE BASIS OF SEXUAL ORIENTATION

Your delegation was considerably concerned about a resolution from the District of Columbia delegation which would have changed the AMA Bylaws 1.50 by addition of the words "or sexual orientation" so that it would read as follows:

DISCRIMINATION. Membership in any category of the American Medical Association or in any of its constituent associations shall not be denied or abridged on account of sex, color, creed, race, religion, ethnic origin, national origin, or sexual orientation.

We felt that this would give overt approval in our Bylaws to so-called "alternative life-styles," or homosexuality, that it might lead to questionnaires about life-style which would be an invasion of privacy, and that it was particularly obnoxious because it would be binding on constituent associations. We and several others spoke strongly against it in the Reference Committee hearings, and were surprised when the Reference Committee came out in favor of adoption. We again spoke against it on the floor of the House and were pleased that it was not adopted.

DRUG ABUSE IN THE UNITED STATES (P. 15)

The House considered a detailed Board report on the problems of substance abuse and how this may adversely affect the next generation, strengthened the report with amendments and adopted it. It also adopted a resolution which called upon the AMA to recognize that substance abuse is the major health problem in the United States today and that its solution requires a multifaceted approach; declare substance abuse its No. 1 public health priority; take a positive stance as a leader in matters concerning substance abuse; and study innovative approaches to the elimination of substance abuse dependencies and their resultant street crime, including approaches that have been used in other nations. A resolution calling for the AMA to develop guidelines for drug testing of physicians was referred to the Board for report back at A-90. The House also adopted a resolution that the American Medical Association explore the development of a National Physician's Substance Abuse Hotline.

BILLING FOR CROSS-COVERAGE

In response to a number of resolutions addressing physician dissatisfaction with the refusal of Medicare, Medicaid and most private payors to allow solo practitioners to bill for services provided by covering physicians, the House approved a policy calling for the AMA:

"To pursue all appropriate legislative, regulatory, and administrative means to amend, or eliminate the inappropriate enforcement of the Social Security Act and/or Medicare regulations in order to make it possible for physicians in solo or group practice to bill and receive payment for professional services to their Medicare patients rendered by colleagues who provide them with traditional short term coverage."

COST CONTAINMENT AND HOSPITAL MEDICAL STAFF (P. 6, 7)

The Hospital Medical Staff Section, meeting just before the AMA House, had protracted discussions of the problems of cost containment in hospitals, particularly as related to the individual physician habits and performance. One resolution from the HMSS asked the AMA to work quickly with Congress, senior citizens groups, and other interested parties to address the very legitimate health care concerns of seniors, including multiple hospital admissions in a single calendar year, long term care, Hospice and home health care, and pharmaceutical costs. This was adopted with minor change.

EXTENSION OF MEDICARE PEER REVIEW (P. 10)

A demonstration project under the Wisconsin PRO, but involving six other Medicare PROs, to extend peer review to M.D.s' Offices, was discussed at length and soundly criticized.

ABORTION (P. 3)

After much discussion both in the Reference Committee and on the Floor, the

House of Delegates passed a resolution that "early termination of pregnancy is a medical matter between the patient and the physician, subject to the physician's clinical judgment, the patient's informed consent, and the availability of appropriate facilities." This was considered by Nancy Dickey, Trustee, to be simply a reaffirmation of existing AMA policy which states "abortion is a medical procedure and should be performed only by a duly licensed physician in conformance with standards of good medical practice and the laws of the state." There was still some doubt in many people's minds as to whether there was any real change in policy. Just what constitutes "early termination" was left undefined. In adopting the policy, the AMA did not alter its respect for a physician's right to refuse to perform an abortion.

LICENSURE EXAMINATIONS (P. 5)

The House endorsed the concept of a single examination for medical licensure. Previously the AMA had supported the use of both the National Board Examination and the Federation Licensing Examination (FLEX). The House adopted a Council on Medical Education report that endorsed the change, and specified certain other recommendations as to how to set up the examination. The House adopted a number of other important recommendations in regard to medical education, postgraduate education, and licensure.

SMOAK REPORTS FOR AMPAC (P. 29)

Randy Smoak, Chairman of AMPAC, gave a report to the House, emphasizing that many of the decisions in regard to the nation's resources which are to be spent on health care, medical education, and research will be decided in some form that involves political decisions, be it local, state or federal level. He emphasized that it is imperative for each of us to be at the table to preserve or make appropriate changes that are best for medicine and the patients we serve. He

described AMPAC's participation in eight special elections for Congressional seats, supporting four Republican and four Democratic candidates, in what ordinarily would be an "off election" year.

SCMA DELEGATION

The SCMA was represented by a full delegation who worked hard, but found time to enjoy the sights and recreational facilities of Hawaii. Several members took the opportunity for trips to other islands either before or after the convention. The delegation included Randy Smoak, Don Kilgore, and John Hawk, delegates; Charlie Duncan, Walt Roberts, and Gavin Appleby, alternate delegates; Dan Brake, President; John Simmons, President-Elect; and Chris Hawk, Chairman of the Board. Barbara Whittaker and Bill Mahon attended as staff members, Roger Gaddy and Steve Hulecki were delegates to the Young Physicians Section, and Ann-Marie Leventis was a delegate to the House Staff Section. Your entire delegation appreciates greatly the opportunity of representing your association. We welcome input from all of you and participation with us at any future meetings of the House of Delegates.

Editorial

I AM A CHEMICAL

What is the number one health problem in America today? Cancer, heart disease, or AIDS? Wrong. It is drug addiction and alcoholism.

America has become a CHEMICAL CULTURE in which any kind of discomfort, either physical or emotional, is unacceptable because there is a shot, pill, powder or needle that will correct it. Need instant relief? Turn to chemicals, but there is a price to pay and that price is addiction.¹

I am a Chemical.

I appear in many guises, shapes, forms, colors, tastes and odors. I am lovable, attractive, friendly, delightful, delicious, exhilarating, and most of all, enticing.

I bring pleasure, relaxation, joy, excitement, euphoria and feelings of pride and power. I create exaggerated lows and false highs.

You will love me, hate me, desire me, despise me, search for me, pay a king's ransom and, when necessary, kill for me.

I am called friend, angel, sustainer, lover, savior and, most recently, ecstasy.

I am everywhere, but when you need me the most, nowhere.

I will caress you, thrill you, heal and feed you and eventually can addict and destroy you.

MATERIALS AND METHODS

I am a Chemical.

Let me introduce myself.

When I am an extract from the juice of opium poppies, coca shrubs, or created synthetically, I am called NARCOTIC. Label me Heroin, Cocaine, Demerol or Morphine, and I will ease the pain caused by surgery, injury or illness. Abuse me and you will end up in a hospital emergency room or morgue.

When I am the compound— C_2H_5OH —an etherlike substance, call me ALCOHOL. I can cheer, calm, sedate, excite and delight you. Or, I can produce violence and cause blackouts. Alcoholism is not just an illness that affects

livers—it is an illness that affects families. Alcoholism causes people to be unreasonably angry at people they love the most.² One out of every three hospital beds is occupied by somebody admitted for damage that alcohol has done to one or more organ systems.² The incidence of Alcoholism is 35 times greater among medical people than among laymen. If you are a physician, nurse, dentist or pharmacist, alcoholism is an occupational hazard.¹

When nicotine, carbon monoxide and hundreds of other noxious gases are combined chemically, I am called TOBACCO. I can cause you to be excited, aggressive, or produce withdrawal symptoms, and shorten your attention as well as your life span.

When green plants use the energy of sunlight to combine carbon dioxide, water, and soil into chemicals, I am called FOOD. The food that people and animals eat comes either from plants or from animals that eat plants. As Food, I can supply energy, feed and sustain you, help you to grow, repair tissues, and prevent deficiencies. In addition, I can be your best dining companion. Abuse Food and I can cause heart disease, gout, diabetes and early death.

DISCUSSION

I am a Chemical.

You are almost always looking for Chemical me, but for certain vulnerable individuals, I search for you. Who are these special people born with an inherited predisposition and are at genetic risk of severe addiction?²

Are you a curious person looking for a thrill, a high, or are you expressing rebellion or response to peer pressure? Are you trying to escape depression, or are you overtired, have feelings of inadequacy, or are you tense, anxious or bored? Are you the child of addictive parents, for we know a heredity factor exists in 10 percent of vulnerable people. Have we just met following surgery, illness or injury? Do

you feel invincible, and enjoy living dangerously and on the edge? Do you think you can always outwit your peers? Are you impulsive, volatile, or are you lost, friendless, searching for approval, and does any excess of my chemicals feel familiar and comforting to you?

For the present, we cannot truly tell who is at risk, for addiction knows no bounds of age, race, color, sex or religion.

If you are one of these special vulnerable people, please do not let me become that special to you. If you feel weak, I will falsely make you feel powerful, energetic, and sexual. By altering the Dopamines and Endorphines in the brain, I can manipulate your moods, motor skills and memory.

Even if you are not genetically predisposed, you can still become an addict, only you have to work at it. However, if you are genetically predisposed, it is easy to become an addict. The drug will do all the work.²

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CONCLUSION

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MARTIN H. ZWERLING, M.D.
146 University Parkway
Aiken, S. C. 29801

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Guest editorials reflect the opinion of the author and do not necessarily reflect the opinion of the Editorial Board or the leadership of the South Carolina Medical Association.

—CSB

On the Cover:

BENJAMIN RUSH: 1745-1813

Benjamin Rush, "the American Sydenham" and signer of the Declaration of Independence, was born in Philadelphia County, Pennsylvania, in 1745, of Quaker parents. After his early education, he received his B.A. from Princeton in 1760 and apprenticed himself to Dr. John Redman, a prominent Philadelphia physician, for six years. For his formal medical training, the young Rush went to Scotland as did many of his peers, and received his M.D. in 1766. After studying in London and Paris, he returned to Philadelphia in 1769 and was made Professor of Chemistry in the College of Philadelphia, the first medical school in the colonies. Dr. Rush became Professor of the Institutes of Medicine in 1791 when the college became the University of Pennsylvania. He held this post until his death. It has been estimated that over his 44 years of teaching he instructed 2,250 young physicians.

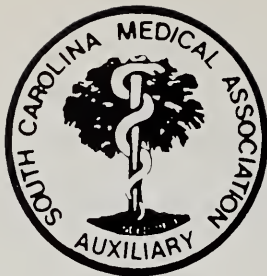
Dr. Rush rejected most of the prevalent medical teachings of the time and formulated his own theories of disease and treatment. His

therapeutic standbys were the lancet and calomel. The latter he called "Sampson" and his detractors were fond of saying that it was "because it has slain its thousands," but his copious blood-letting, low diet, low sickroom temperatures and liberal use of hydrotherapy seem to have been effective.

A prolific writer, Rush is well known for his treatises against war, slavery, alcoholism, and the death penalty. His most famous work is perhaps *Medical Inquiries and Observations on the Diseases of the Mind*.

Dr. David Ramsay of Charleston was a former pupil and great admirer of Rush and they maintained a life-long friendship and correspondence. In one of his letters to Ramsay Dr. Rush wrote: "Medicine is my wife; science is my mistress; books are my companions; my study is my grave; there I lie buried, the world forgetting, by the world forgot."

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Auxiliary Page

THE PHYSICIANS' FAMILY SUPPORT COMMITTEE

The *Physicians' Family Support Committee* serves as a support network for physicians' families. This is not a therapy group, but a resource in many areas—child care, chemical dependency, grief, malpractice, mental illness, aging, long term illnesses, marital problems, problems with children, etc. It is composed of concerned auxiliaries who can listen, support, keep confidences and provide resources.

Many of the articles in this edition of *The Journal of the South Carolina Medical Association* focus on the wide-ranging effects of chemical dependency. The auxiliary committee is available to help family members and the physician (sometimes it is not the physician who is chemically dependent). This help is confidential, non-blaming and certainly not punitive, as the goal is "a healthy family unit." We listen and answer questions. We empathize and help find resources. Most of all, we care and are concerned.

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Chairperson

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The Journal also welcomes timely review articles by institution-based physicians. However, it is the philosophy of the Editorial Board that state medical journals do not represent an appropriate forum for research findings of a specialized nature. Such findings, it is felt, belong in national or regional specialty or subspecialty journals. Articles by institution-

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³ Bottsford JE, Bearden RC, Bottsford JG: A ten year community hospital experience with abdominal aorta aneurysms. *J S C Med Assoc* 79: 57-62, 1983.

MATERIAL FOR COVER: The illustrations for the cover of *The Journal* are selected by the Curator of the Waring Historical Library, Charleston, S. C. *The Journal* welcomes suggestions and illustrations for the cover. Such suggestions should be sent to the editorial office.

ROE FOUNDATION AWARDS

Through a gift by the Roe Foundation, a Thomas A. Roe and Shirley W. Roe award of \$3,000 is given each year at the annual meeting since 1985. All manuscripts submitted by South Carolina physicians will be considered for the award.

Articles written by practicing physicians are judged by members of the Editorial Board of *The Journal* on the basis of original scientific content and clarity of presentation. Practicing physicians are encouraged to report observations in *The Journal*, which was originally established for this purpose.

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COLLAGENOUS COLITIS AS A CAUSE OF CHRONIC DIARRHEA

STEPHEN J. BOTT, M.D.*

Collagenous colitis is a disease characterized by watery diarrhea, grossly normal colonic mucosa, and a thickened subepithelial deposit of collagen when viewed microscopically. Over 70 cases have been reported in the literature since this entity was initially described by Lindstrom in 1976.¹ The following case displays many of the characteristic features of this clinicopathological entity.

CASE REPORT

A 65-year-old white female presented for evaluation with a two-year history of diarrhea and a ten kg. weight loss. The patient complained of occasional left lower abdominal pain, nocturnal diarrhea, and typically postprandial diarrhea. Diphenoxylate and atropine had been prescribed previously but had not completely controlled her symptoms.

The past medical history was remarkable for surgery for a bowel obstruction over 30 years ago. This was presumed secondary to adhesions from a previous hysterectomy and appendectomy. The patient also complained of anxiety and a marked sleep disturbance.

Physical exam revealed a thin, chronically ill-appearing white female. The blood pressure was 142/84 mmHg., pulse was 60 beats/minute and regular, and the weight was 52 kg. Physical exam of the head, neck, lungs, and heart was unremarkable. Abdominal exam revealed normal bowel sounds. No mass or organomegaly was noted. Rectal exam revealed guaiac negative loose stool.

Laboratory evaluation included a mildly elevated ESR at 46. Stool was negative for ova and parasites on two occasions including one examination for cryptosporidia. Thyroid function studies, complete blood count, and a metabolic panel (SMA-12) were within normal limits.

After preparation with an oral polyethylene glycol solution and cleansing enemas, the patient underwent colonoscopy and ileoscopy. The sigmoid was angulated secondary to adhesions, but the colonic mucosa was grossly normal to the cecum. The terminal ileum was visualized and was also normal. Four random colon biopsies were obtained proximal to the rectum. All biopsies revealed a marked increase in subepithelial collagen and an increase in inflammatory cells (see Figure 1).

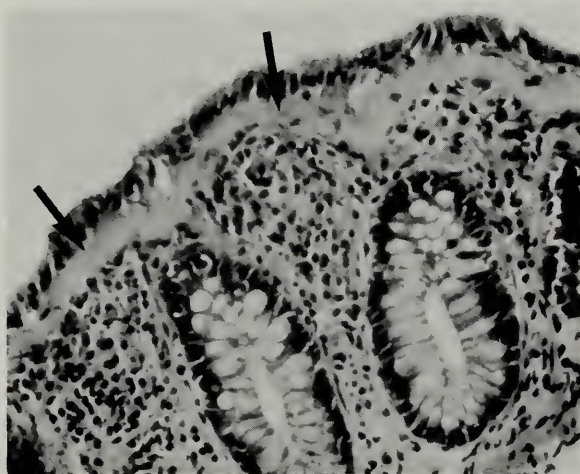


FIGURE 1. Thickened subepithelial layer of collagen measuring 20 microns (arrows) in collagenous colitis (100x).

* 200 S. Herlong Ave., Suite B, Rock Hill, S. C. 29730.

Sulfasalazine, 1 gram p.o. bid was instituted with an excellent response with cessation of diarrhea. However, two months after initiation of sulfasalazine therapy, the patient's symptoms returned, and a 4 kg. weight loss occurred. Prednisone, 30 mgm. qd was begun, and again an excellent response occurred with cessation of diarrhea and weight gain. Prednisone was gradually tapered and discontinued over the ensuing four months with control of symptoms. Diarrhea returned two months after discontinuation of steroid therapy. Flexible sigmoidoscopy revealed normal mucosa, and multiple biopsies were obtained from the mid and distal sigmoid colon. Biopsies again showed a subepithelial layer of collagen. The patient responded to re-initiation of steroid therapy.

DISCUSSION

As exemplified by this patient, 80 percent of cases of collagenous colitis have been reported in women, with a mean age of 54 years. Diarrhea is the hallmark of the disorder, and occasionally weight loss, abdominal pain, and nausea may be observed. Endoscopic visualization of the colon and rectum reveals a normal appearing mucosa. Occasional hyperemia has been noted.² Microscopically, however, there is a marked increase in subepithelial collagen. Normally, this collagen band is two to six microns in thickness. In patients with collagenous colitis, this band is usually greater than 15 microns and can be as thick as 100 microns.² Some authors have emphasized the importance of proximal colon biopsies since occasionally the rectal mucosa may show less or no involvement.³ Wang, *et al.*⁴ suggests that the subepithelial deposition of collagen may be discontinuous and not present in all biopsy specimens, and the importance of multiple biopsies in at least the sigmoid colon is emphasized.

The etiology of this disorder is unclear. Some have suggested that the collagen deposition occurs as a result of epithelial injury and the resultant immune or inflammatory response.⁵ Indeed, collagenous colitis is felt by some to represent the evolution of so-called microscopic colitis. This latter entity is characterized by diarrhea and microscopic inflam-

mation in the mucosa, but without a thickened collagen band. Several patients have been described in whom initial biopsies were consistent with microscopic colitis, but later biopsies showed subepithelial collagen deposition.⁶ While some hypothesize that the inflammatory response and ultimate collagen deposition occurs in response to exogenous toxins, infectious agents, or allergens; others feel that the disease results from an autoimmune process affecting mesenchymal connective tissue in the pericryptal sheath.² Indeed, some patients have coexistent autoimmune diseases such as autoimmune thyroid disease, antinuclear antibodies, diabetes, and polyarthritis. Several cases of coexistent celiac disease of the small bowel have also been reported,³ although collagenous colitis is not secondary to gluten sensitivity and should not be confused with celiac disease or so-called collagenous sprue.

Patients who are not treated occasionally show spontaneous improvement in symptoms and regression of collagen deposits.⁶ Because of the natural variability of symptoms, the effects of treatment are difficult to ascertain. Occasional patients have reasonable control of symptoms with antimotility agents such as loperamide or diphenoxylate. Sulfasalazine appears to be effective in some patients.⁷ Others have reported favorable responses to corticosteroids or oral 5-amino-salicylic-acid compounds.³ With treatment, repeat biopsies may show regression of the collagen layer,⁶ but this is not seen in all cases.

SUMMARY

Collagenous colitis should be considered in the differential diagnosis of chronic diarrheal syndromes. Colonoscopy or sigmoidoscopy in such patients should include biopsy of the mucosa proximal to the rectum, even though the mucosa appears grossly normal. Some patients have associated autoimmune disease, but the etiology of collagenous colitis is unclear. Microscopic colitis has been observed to precede collagenous colitis in some patients. Treatment with antimotility agents, sulfasalazine, oral 5-ASA compounds or corticosteroids may be effective in reducing symptoms. □

ACKNOWLEDGEMENTS

The author wishes to thank Sharon Barnette for her helpful assistance in preparation of this manuscript.

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MECHANICAL VENTILATION: WEANING PROBLEMS AND TECHNIQUES*

D. GREGORY OLIVER, M.D.**
GERALD N. OLSEN, M.D.

The majority of patients who require mechanical ventilatory support can be removed from the ventilator successfully within a few days. These patients tend to have rapidly reversible causes of ventilatory failure and no significant underlying lung disease. Such patients do not require a structured weaning program. When the cause of ventilatory failure has been corrected, these patients can have mechanical ventilatory support discontinued rapidly and without difficulty.

A small group of patients on ventilators require ventilatory support for longer than one week. These patients usually have underlying chronic pulmonary disease, neuromuscular disease, or multisystem extrapulmonary disease. This group poses a much greater problem, and must be approached in a systematic fashion which eventually allows withdrawal of ventilatory support.

The following is an overview of weaning which addresses when mechanical ventilation should be discontinued, reviews criteria used to predict the outcome of discontinuation of mechanical ventilation, and presents an approach to weaning techniques.

CASE REPORT

A 48-year-old female with a history of COPD (FEV₁ 1.5 L), bipolar disorder, and alcohol abuse, was admitted for acute hepatitis presumed to be drug-induced. Nine days after admission, she was noted to be dyspneic and febrile. The chest radiograph (CXR) showed bilateral infiltrates, and she was placed on broad spectrum antibiotics. Her CXR continued to worsen and blood culture grew *Staphylococcus aureus*. Three days later she devel-

oped respiratory distress with a respiratory rate of 36 breaths/minute. Arterial blood gases (ABGs) showed pH 7.53, pCO₂ 29, pO₂ 38, on F_IO₂ = 0.40. She was intubated and placed on a Bennett MA-2+2 ventilator in the intermittent mandatory ventilation (IMV) mode. Her serum albumin level was 1.9 gm/dl and she was started on total parenteral nutrition (TPN). Physiologic parameters were maximal inspiratory pressure (MIP) -20 cm H₂O, vital capacity (VC) 300 cc, static compliance 16 ml/cmH₂O, ABGs: pH 7.44, pCO₂ 41, pO₂ 109, on F_IO₂ = 0.90. Thereafter, her course was suggestive of the adult respiratory distress syndrome (ARDS), with worsening hypoxemia requiring high levels of PEEP and F_IO₂. She was continued on antibiotics and supported with mechanical ventilation, and had gradual improvement in her respiratory status over the next two weeks. Over the next week attempts at weaning were unsuccessful. She had a 7 mm endotracheal tube in place. Her respiratory rate was 32, with an IMV rate of 14, and she demonstrated intercostal retractions with inspiration but no paradoxical respirations. She was noted to have negative inspiratory airway pressure dips while breathing spontaneously from the ventilator circuitry. She also had large amounts of thick secretions. The serum albumin was 2.9 g/dl, the serum phosphate was 1.5 mEq/L, and there was a hypokalemic, hypochloremic, metabolic alkalosis. Physiologic "weaning" parameters were MIP -36 cm H₂O, VC 600 cc, ABGs: pH 7.47, pCO₂ 43, pO₂ 80, on F_IO₂ = 0.50. TPN was continued and the electrolyte abnormalities were corrected with intravenous supplementation. Beta-agonist aerosol therapy was begun to increase mucociliary clearance. She was then placed on computer controlled (Puritan-Bennett 7200) ventilator in the pressure support mode which resulted in a decreased respiratory rate and resolution of the inspiratory intercostal retractions. A larger (8 mm) endotracheal tube was placed.

* From the Department of Medicine, University of South Carolina School of Medicine, Columbia.

** Address correspondence to Dr. Oliver at the Division of Pulmonary and Critical Care Medicine, University of South Carolina School of Medicine Campus, Building 28, Columbia, S. C. 29208.

After 48 hours of "resting" on pressure support, spontaneous breathing (T-piece) weaning was begun. Her serum electrolytes were normal. Weaning parameters were MIP -45 cm H₂O, VC 700 cc, static compliance was 28 ml/cmH₂O, ABGs: pH 7.40, pCO₂ 49, pO₂ 123, on F_IO₂ = 0.50. T-piece trials were gradually increased up to eight hours without distress, and the patient was extubated successfully after 28 days on mechanical ventilation.

This case illustrates several weaning problems including poor pulmonary function due to ARDS, metabolic alkalosis, poor respiratory muscle function due to malnutrition and electrolyte abnormalities, and increased work of breathing due to a small endotracheal tube, increased airway secretions, and high resistance circuits on the older Bennett MA-2+2 ventilator. Once these problems were noted and corrected, the patient was able to undergo progressive weaning resulting in successful extubation.

WHEN TO WEAN

Mechanical ventilation is associated with numerous complications,¹ so it should be discontinued as soon as possible after the process for which it was instituted has been reversed. Prior to attempts at weaning, the patient should be alert, comfortable, and able to cooperate with the weaning process. Ventilatory drive should be intact. Gas exchange should be adequate, with a PaO₂ > 60 mmHg on F_IO₂ < 0.40 and minimal PEEP. The patient should be hemodynamically stable off intravenous inotropic agents and vasopressors.² Once these conditions are met, weaning from mechanical ventilation should be considered.

CRITERIA PREDICTING THE OUTCOME OF WEANING

There are many proposed criteria to predict the outcome of attempts to wean. These criteria reflect various aspects of gas exchange, lung mechanics, and respiratory muscle function. Sahn³ prospectively studied 100 patients receiving mechanical ventilation and showed that all patients whose MIP was < -30 cm H₂O could tolerate discontinuation of mechanical ventilation. Those patients whose resting minute ventilation (\dot{V}_E) was less than 10 L per minute and who could double their \dot{V}_E with a

TABLE 1

Criteria to Predict Successful Weaning

Minute Ventilation < 10 L/minute
Maximum Voluntary Ventilation > $2 \times \dot{V}_E$
Vital Capacity > 1 L
Maximal Inspiratory Pressure < -30 cm H ₂ O
P(A-a)O ₂ on F _I O ₂ = 1.0 < 350 mmHg
Dead space to tidal volume ratio < 0.6
Functional Residual Capacity > 50% predicted

maximal voluntary maneuver (MVV) were also able to discontinue mechanical ventilation. Additional criteria to predict the likelihood of successfully discontinuing mechanical ventilation that have been proposed are listed in Table 1. Unfortunately, of these criteria, none is consistently sensitive and specific predictors of weaning outcome.⁴

WEANING FROM PROLONGED VENTILATION

As stated above, the majority of patients requiring mechanical ventilation can be rapidly weaned without difficulty. Patients with underlying chronic lung disease, acute overwhelming pulmonary disease such as ARDS, multisystem extrapulmonary disease, or neuromuscular disease often require prolonged ventilatory support. It is this type of patient who requires a systematic progressive weaning approach.

The criteria to predict weaning outcome covered previously were largely established in patients requiring short term ventilation, and may not be predictive of outcome in patients on long term mechanical ventilatory support. Morganroth and co-workers⁴ showed that in a group of patients on prolonged mechanical ventilation, there was no difference in spontaneous respiratory rate, tidal volume (VT), \dot{V}_E , or MIP, between a period when they were unable to wean and a later period when they had successful progressive weaning. They did find that decreases in F_IO₂, PEEP, delivered ventilator \dot{V}_E , triggered respiratory rate, and increases in lung compliance correlated with the ability to wean and discontinue mechanical ventilation. They also found that correction of

a variety of nonpulmonary factors such as tachycardia, hypotension, fever, fluid overload, arrhythmias, impaired consciousness, emotional status, and nutritional deficiencies, increased the chances of successful weaning. These findings emphasize the importance of a comprehensive approach to the multiple problems typically present in the patient on prolonged ventilatory support prior to initiating the weaning process.

CAUSES OF FAILURE TO WEAN

When a patient fails to wean, it is helpful to categorize potential causes and address these in a systematic fashion. These categories include cardiopulmonary function, ventilatory drive, respiratory muscle function, increased work of breathing and increased CO₂ production.

Inadequate cardiopulmonary function. It is obvious that the underlying pulmonary condition for which mechanical ventilation was initiated needs to be improved before weaning is likely to be successful. Parameters to follow are those that measure gas exchange such as PO₂, the difference in alveolar and arterial oxygen tension p(A-a)O₂, and shunt fraction, as well as measures of mechanical function such as compliance and VC. Once these parameters are improving, attempts at weaning can be initiated.

Cardiac failure can hamper attempts to wean. Patients who are hypotensive or who require intravenous vasopressors or inotropic agents have diminished blood flow to the diaphragm and thus are not likely to be weaned successfully. Mechanical ventilation may benefit the failing left ventricle by decreasing right ventricular preload and decreasing left ventricular afterload.⁵ Upon removal from mechanical ventilation, patients with ventricular dysfunction may develop increased pulmonary capillary wedge pressure and decreased cardiac output resulting in worsening lung compliance and hypoxemia, and weaning failure.

Decreased ventilatory drive. Inadequate ventilatory drive can cause failure to wean. Central nervous system depression and metabolic alkalosis are two relatively common causes of reduced ventilatory drive. CNS depression can be caused by primary neurologic damage, metabolic encephalopathy, or narcotics. Metabolic

alkalosis is usually due to diuretics or nasogastric suction and leads to depression of ventilation. These two problems are easy to recognize clinically and should be corrected prior to attempts at weaning.

Inadequate respiratory muscle function. Respiratory muscle weakness may be the cause of respiratory failure or may develop during the course of prolonged mechanical ventilation. Primary respiratory muscle weakness is usually the result of neurologic insults or neuromuscular disease. These patients may need prolonged mechanical ventilation. Respiratory muscle weakness which develops during the course of prolonged mechanical ventilation, however, is usually due to nutritional deficiencies or electrolyte abnormalities.⁶ Malnutrition is common in ventilated patients, is associated with decreased respiratory muscle strength, and adequate nutrition leads to increased respiratory muscle mass and strength.¹ Electrolyte abnormalities such as hypophosphatemia, hypokalemia, hypocalcemia and hypomagnesemia are common in ventilated patients and associated with decreased respiratory muscle function.⁷ These abnormalities should be sought and corrected in patients who fail to wean.

Another theoretical cause of respiratory muscle weakness during prolonged mechanical ventilation is "disuse" atrophy. This is known to occur in skeletal muscle but whether it actually occurs in respiratory muscle is not known. It is likely that patients on mechanical ventilation continue to have sufficient inspiratory muscle work to prevent atrophy.⁸ An exception may be those patients who require heavy sedation or paralysis and patients with decreased ventilatory drive due to neurologic events.

Respiratory muscle fatigue has been implicated in patients who fail to wean. Diaphragmatic fatigue can be induced in normal subjects breathing through high inspiratory resistances. The role of muscle fatigue in ventilated patients remains uncertain. Cohen and colleagues⁹ found electromyographic evidence of diaphragmatic fatigue in patients during unsuccessful weaning attempts. More recently, Swartz and Marino¹⁰ found that diaphragmatic strength, as measured by transdiaphragmatic pressure, did not decrease during unsuccessful

weaning trials. In a subgroup of patients with hypercapnia, there was a significant increase in the transdiaphragmatic pressure. They concluded that failure to wean in these patients was not due to diaphragmatic muscle failure. In addition, Tobin and co-workers¹¹ described a rapid, shallow pattern of breathing which developed in patients who failed weaning attempts. The abrupt development of this pattern of breathing upon disconnection of the ventilator, and the lack of further progression during spontaneous breathing suggest that this breathing pattern was not due to respiratory muscle fatigue. Tobin¹² also demonstrated that abdominal paradox and respiratory alternans, which Cohen's group took as evidence of respiratory muscle fatigue, occur as a result of increased respiratory load rather than muscle fatigue, and may be present in patients who wean successfully. Thus, it remains unclear whether respiratory muscle fatigue is clinically important in patients who fail to wean.

Increased work of breathing. Fiastro and co-investigators¹³ correlated respiratory work with ability to wean successfully, and Tobin¹² showed that unsuccessful weaning was associated with an increased respiratory load which results in increased work of breathing. An increased respiratory load could result from high resistance circuits found on some ventilators, a small endotracheal tube, persistent bronchospasm, and increased airway secretions. These problems should be sought in the patient who fails weaning attempts, and corrected if possible, thus increasing the likelihood of successful weaning.

Increased CO₂ production. Elevated CO₂ production which the patient then must eliminate by ventilation may produce failure to wean in patients who have limited ventilatory reserve.¹⁴ Fever, sepsis, and other catabolic states will result in increased CO₂ production and these conditions should be treated before weaning begins. A less obvious cause of increased CO₂ production is the administration of hyperalimentation in excess of the patient's caloric requirements. Carbohydrates result in higher CO₂ production than fats. Thus, ventilated patients should not receive excess calories and at least one-half of the non-protein calories should be provided as lipid.¹

WEANING TECHNIQUES

Weaning the patient from prolonged mechanical ventilation requires a comprehensive approach to detect and correct the multiple problems which may be contributing to the inability to wean. Each of the categories addressed above should be reviewed systematically, and problems uncovered should be corrected if possible. Once this has been done, the patient is ready to begin a progressive weaning program. The principle of weaning, whichever mode is used, is to train the respiratory muscles gradually to increase their functional capacity over a period of time as the work of breathing is reduced by treatment of the underlying disease. The concept is to stress the muscles to the point of mild fatigue and follow with a rest period.¹⁵ The major problem is that it is clinically difficult to determine exactly when respiratory muscle fatigue occurs. Brochard and co-workers¹⁵ have suggested that clinical monitoring of the sternocleidomastoid (SCM) muscle activity by palpation or electromyographic (EMG) studies is useful in assessing the presence of fatigue. Increased activity of the SCM muscle indicates the development of fatigue. As previously mentioned, paradoxical breathing and respiratory alternans seem to be associated with increased respiratory load rather than fatigue, and may be present in patients who wean successfully.¹² Elevated PCO₂ is not a good indicator of fatigue because it occurs late in the course of respiratory muscle fatigue.⁹ Another problem is that the duration of rest which should follow muscle stress has not been determined. As a result of these difficulties, the timing of exercise and rest during weaning relies on clinical judgment rather than hard data.

The traditional approach to weaning is to use either the T-piece or IMV method. With T-piece weaning, the patient is allowed to breathe spontaneously for gradually longer periods of time as tolerated, with intervening rest periods. With IMV weaning, the number of breaths delivered by the ventilator is gradually decreased as tolerated, allowing the patient to assume a greater proportion of the total respiratory work over a period of time. Sporn and colleagues² covered these methods of weaning

in detail in their recent review of discontinuation of mechanical ventilation.

Recently, weaning with pressure support ventilation has been advocated.¹⁶ Brochard and colleagues¹⁵ studied the effects of various levels of pressure support in eight patients who had failed previous weaning attempts. They found that pressure support could prevent diaphragmatic fatigue by diminishing the patient's work of breathing and total oxygen consumption. By varying the level of pressure support they could obtain a level of work which maintained maximal diaphragmatic electrical activity without inducing fatigue. They also showed that this optimal level of work could be determined at the bedside by monitoring sternocleidomastoid muscle activity. MacIntyre¹⁶ suggests that the optimal level of work can be determined by monitoring the spontaneous respiratory rate. By applying this information, a program of weaning using pressure support can be established. A level of pressure support is selected which produces the optimal amount of work on the respiratory muscles. The time on this level of pressure support is gradually increased, with intervening periods at a pressure support level that rests the muscles. Once the patient tolerates a pressure support of 0, the weaning process is complete. Currently, this approach remains theoretical since no data are available comparing this mode of weaning to the "traditional" methods. □

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GONOCOCCAL ENDOCARDITIS: REPORT OF A CASE AND REVIEW OF THE LITERATURE*

J. ELWOOD OWENS, M.D.**

JOSEPH A. KELCHAK, M.D.

At the present time, gonococcal endocarditis is a rare disease; however, this has not always been the case. Prior to the development and availability of appropriate antibiotics, *Neisseria gonorrhea* accounted for up to 25 percent of all cases of endocarditis.¹ One might assume that the reason for the decline in gonococcal endocarditis is related to the introduction of antibiotics in the 1940s. There are, however, many urogenital infections that go untreated and the incidence of gonorrhea has reached one million cases reported per year in the United States.² Before the antibiotic era, gonococcal endocarditis tended to be associated with an acute course of high mortality. Since the antibiotic era, cases have been associated with more insidious onset. This could be associated with partial or incomplete treatment of gonococcal urogenital infections.

The bacteriologic diagnosis can be difficult. It requires more than six blood cultures and a long incubation period. The bacteriologic diagnosis may not always be available at the time of emergency surgery. Circulating immune complexes may also lead to extra-cardiac manifestations and these manifestations can lead to such sequelae as nephrotic syndrome or diffuse immuno-complex glomerulonephritis.^{3, 4}

Recent literature describes more aggressive management of patients who have valvular endocarditis and are in cardiogenic shock. This approach is a result of improved cardiovascular surgical techniques and improvements in prosthetic valves. The most commonly involved valve in the valvular endocarditis is the aortic valve. The mitral valve is less commonly involved.³

CASE REPORT

The patient was a 35-year-old black female,

who presented to the emergency room at McLeod Regional Medical Center in septic and cardiogenic shock, having had a two-week history of fever, chills, anorexia and increasing weakness. She had been in "poor health" with a history of ethanol abuse, and a self-reported weight loss of 20 pounds over a nine-month period of time. Immediately before coming to the emergency room she developed nausea, vomiting, and hemoptysis; she described palpitations, rapid heart rate, and increasing dyspnea. A syncopal episode prompted her coming to the hospital. The patient had been followed in the local county health department and had been treated three times as a gonorrhea contact and once for being a syphilis contact. Her studies, however, had always been negative.

Presenting vital signs were temperature, 104.0 orally; pulse 152 with a profound supraventricular tachy-arrhythmia; blood pressure 90/60; and a respiratory rate greater than 30 breaths per minute. Though alert and oriented, she was in acute distress. On exam there was no jugular venous distention. Thoracic exam revealed tachycardia, a grade 4/6 systolic ejection murmur, loudest at the left sternal border, and mild bibasilar rales. The abdominal exam was unremarkable. Pelvic exam revealed diffuse cervical and adnexal tenderness. An intra-uterine device which, by history, had been present for 10 years, was removed. Peripheral pulses were present but weak. There was no pedal edema, nor any evidence of splinter hemorrhages.

Initial laboratory showed a white blood cell count of 25,400 with 61 segs and 18 bands, hemoglobin of 8.7 grams hematocrit, 25.3%. Sodium was 126, potassium 3.5, chloride 89, bicarbonate 25, BUN 19, creatinine 1.6. A room air blood gas showed a PH of 7.534 and a PCO₂ of 28.9 and a PO₂ of 49.8 with 89 percent saturation. No organism was seen on a buffy

* From McLeod Regional Medical Center, Florence.

** Address correspondence to Dr. Owens at 305 E. Cheves Street, Suite 270, Florence, S. C. 29501.

coat of the serum. Her gram stain from the pelvic area showed two plus gram negative cocco-bacilli with trichomonas. The EKG was significant only for severe sinus tachycardia with non-specific ST and T-wave changes. Chest x-ray revealed left ventricular enlargement and increased interstitial markings in the lungs. Echocardiogram in the emergency room showed marked mitral regurgitation. There was also evidence of a large vegetation on the anterior leaflet of the mitral valve. Cultures were drawn immediately.

Initial therapy was intravenous fluids after which her respiratory status worsened, with pulmonary congestion on chest x-ray. She was anuric. Dopamine infusion was quickly advanced, and the patient was intubated with profound pulmonary edema. The patient was given Nafcillin, Claforan and Gentamicin.

A cardiac catheterization showed the patient to have severe mitral valve regurgitation; an intra-aortic balloon pump was placed, and on three pressor medications, the blood pressure was 50 mm. of mercury. The patient was prepared for immediate valve replacement for septic and cardiogenic shock due to severe erosive valvular endocarditis.

At surgery, the patient was found to have a large, infectious vegetation on the anterior leaflet of the mitral valve (Figure 1). The valve was totally excised and replaced with a 25 mm. Medtronic Hall, tilting disc, mechanical prosthesis. There was no noticeable vegetation on what could be seen of the aortic valve through the left atrium.

The balloon pump was gradually weaned as well as the pressor support. Two of the original blood cultures were positive for *Neisseria gonorrhea*. The patient's antibiotics were changed accordingly and she received a full four-week course of high dose parenteral aqueous penicillin.

The decision to put a mechanical valve in at the time of surgery was based upon the thought that a mechanical valve could withstand an attack of valvular endocarditis better than a biodegradable tissue valve. There was also a risk that since the patient had a history of alcohol abuse she would be non-compliant regarding the taking of her Coumadin. The risk of infection of the new valve seemed the greater threat, at the moment.



FIGURE 1. Vegetations on anterior leaflet of mitral valve.

The patient now is approximately 12 months following surgery and has a normal sinus rhythm, a sharp cardiac silhouette, and no evidence of any perivalvular leak. She has been declared essentially free of endocarditis at this time. The patient has improved her socioeconomic status and is following her Coumadin regimen. Pertinent laboratory studies at her hospital admission showed the HIV titer was negative, or non-reactive, and her hepatitis B surface antigen was negative. Her prothrombin time has been kept in the 15- to 18-second range. She has continued on low dose Digoxin, low dose diuretics and Dilantin for a previous seizure disorder.

COMMENT

Less than 50 cases of gonococcal endocarditis have been reported since the development of antibiotics in 1949. It is understandable that an abrupt reduction in the frequency of gonococcal endocarditis would occur after the introduction of antibiotics. However, the increase in numbers of gonococcal urogenital infections has been observed to a million cases per year in the United States.

The incidence of gonococcal endocarditis has not increased with the increase of generalized gonococcal infection. This may be due to the traits of penicillin sensitivity, serum resistance and the nutritional requirements of gonococcal strains.⁵ Disseminated gonococcal infection has been shown to be related to the resistance of a particular bacterial strain to natural complement-mediated bacterial antibody of pooled human serum. Various gono-

coccal strains that demonstrate serum resistance have been shown to be sensitive to a wide variety of antibiotics. Also, nutritional requirements of several gonococcal strains correlate with hypersusceptibility to the bactericidal effects of normal human serum.⁵

There may be a group of patients in the clinical population that had previous rheumatic heart disease as a child and they coexist with partially scarred valvular tissues, and can accentuate a clinical scenario of valve destruction and valve perforation and cardiogenic shock, as well as ongoing septic shock. These patients can present a full clinical spectrum anywhere from a subacute endocarditis with fever, chills, constitutional symptoms and peripheral embolic phenomenon to a full-blown congestive heart failure picture with rapid deterioration, septic shock and death.

The Journal of Sexually Transmitted Diseases, Oct.-Dec. 1987, succinctly summarizes the clinical features of bacterial endocarditis. The prevalence of gonococcal endocarditis male to female ratio is approximately 20 to one. Fever was the most common presenting complaint (74%); 44% complained of arthralgias, and only 12% complained of rash as a major symptom. Eighteen percent had an obvious arthritis. Twenty-nine percent had a recent history of venereal disease or urethral discharge, and 88% had a heart murmur at presentation or early in their course, with only 18% having had a prior history of heart disease or heart murmur. Thirty-eight percent of the cases had mild to moderate anemia and 94% of the cases had positive blood cultures, which occurred between the second and 19th day of hospitalization. The aortic valve was involved in 71% of the cases, the mitral valve involved in 24%, the pulmonic valve was involved in 9% and the tricuspid valve was involved in 3%. There were a few rare patients who had both aortic and mitral valve involvement. At least one-fourth of all patients reported to have gonococcal endocarditis in the last 30 years died of their disease. Those patients with unstable cardiac hemodynamics did improve when treated with emergency valve replacement. Deaths subsequent to emergency valve replacement were associated with high risk status, septic shock and cardiogenic shock at the time of surgery.

Echocardiography is of great importance in the initial assessment of patients with gonococcal endocarditis. Evidence of valvular regurgitation and assessment of cardiac function (ejection fraction, wall thickness, and wall motion abnormalities) are important to know prior to catheterization. One might make the case that in an extremely life-threatening and shock-prone situation, a cardiac catheterization might be omitted to get the patient to the operating room quicker.

Cardiac catheterization demonstrates the valve in question, and compromise of the coronary circulation, if any, prior to emergency surgery.

The most important item in surgical treatment of valvular endocarditis with valvular insufficiency is the appropriate and proper debridement of all infectious and devitalized tissues. This provides a viable annulus in which to place competent sutures with appropriate Teflon pledget material. It is appropriate to continue antibiotic therapy for one month postoperatively.

Gonococcal endocarditis, though it is rare, may be showing a slight increase as documented in recent literature. The aortic valve appears to be the most frequent site of infection; however, the mitral valve may also be independently affected. The involvement of one or both valves produces serious hemodynamic destabilization of the patient. It is imperative that rapid clinical assessment and hemodynamic stabilization be attempted. Echocardiography and emergency cardiac catheterization provide critical information. Emergency valve replacement is often necessary and mandatory antimicrobial coverage is imperative in the preoperative and postoperative therapy of the patient. Gonococcal endocarditis is a relatively rare case of subacute bacterial endocarditis with valve deterioration and cardiac failure. It should be considered in patients who have a long history of substance abuse and poor health standards and where previous history of venereal disease is present.

SUMMARY

Gonococcal endocarditis may appear in the extremes of cardiogenic and septic shock. These patients must be quickly stabilized and evaluated by echocardiography and cardiac

catheterization where possible. Urgent surgical intervention for valve replacement may be necessary before complete stabilization of the patient's cardiac hemodynamics status is accomplished. Although the aortic valve is most commonly involved with gonococcal endocarditis, the mitral valve is involved as well and may present as a true emergency situation. Right-sided valve infections may be treated by a more conservative medical means if the patient does not deteriorate into a hemodynamic instability. Deterioration of the patient requires immediate intervention with catheterization and surgery in the absence of positive blood cultures to confirm the diagnosis of gonococcal endocarditis. Once the need for emergency surgical valve replacement has been determined the rules of complete debridement of all infected tissues, insertion of sutures into healthy annular tissue, and selection of an

appropriate mechanical valve apply. Long-term antibiotic therapy is included in post-operative management. □

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SCMA

NEWSLETTER

FEBRUARY 1990

HIGHLIGHTS OF JANUARY 20 BOARD OF TRUSTEES MEETING

The board was reminded that the limits set by state law for copying records cover only the actual cost of copying and not any written opinions a physician may be requested to give.

John W. Rheney, Jr., MD, SCMA Treasurer, has accepted the position of Medical Director of the SC PRO.

SCMA President-elect John W. Simmons, MD, advised the board that S.329, the Utilization Review Bill, had passed the House and Senate. It was signed by the governor on January 31.

The SCMA, SCMAA and SCIMER Health Education Van has visited 60% of the counties in the state and is scheduled for use in the classroom setting in the fall of 1990. The van, along with the portable, three-dimensional exhibits, will be at the SCMA Annual Meeting at the Omni Hotel in Charleston for the benefit of those who have not seen it. This year's Annual Meeting is to be held April 25-29.

The board was advised that, according to AMPAC, SOCPAC has the highest percentage of sustaining members in the country.

For information on actions of the Board of Trustees, call Bill Mahon at SCMA Headquarters.

MEDICARE UPDATE

You will be mailed a "Dear Doctor" letter from Medicare no later than February 20 which will include your 1990 Medicare reimbursement rates and other information. Enrollment to become a participating physician will occur in March. Physician workshops will be held in Greenville, Columbia, Anderson, Florence and Charleston. Dates and locations will be mailed to you. If you have questions, contact Barbara Whittaker at SCMA Headquarters.

MEDICAID UPDATE

Clarification Regarding C-section Standby

If a family practitioner or certified nurse midwife is preparing to deliver a child and it is decided that the child must be delivered by an emergency C-section and an obstetrician must be called in, the family practitioner or certified nurse midwife may

receive payment from Medicaid for being involved in the case by billing procedure code 59500 with an 80 modifier. Technically, the family practitioner or certified nurse midwife would be billing as an assistant surgeon on the C-section. Reimbursement for this procedure is \$160.00.

Family practitioners should note that if they perform an exam on the newborn after delivering the baby, an additional charge may be billed using procedure code 90225. The reimbursement rate is \$50.00.

Surgical Package

Office and hospital visits are allowed up to and including the day of surgery. The postoperative surgical package is still in effect, i.e., office and hospital visits are not allowed within 30 days after surgery, unless the diagnosis is unrelated to the surgery. Emergency and critical care visits are still exceptions to the surgical package.

Timely Claims Submission

Federal regulations mandate that all claims be correctly submitted by SHHSFC standards within one year from date of service to be paid by Medicaid. Any claims which need to be resubmitted due to an error rejection should also be submitted within the year.

Retraction Regarding Billing for an Antepartum Exam

In the Medicaid notes in the December "SCMA Newsletter," you were advised that procedure code S0012, used for billing for an antepartum exam with additional services, would be reimbursed at \$40.00. The SCMA has been advised that the procedure code is actually S0112 and the reimbursement rate is \$25.00. SHHSFC apologizes for any confusion this has caused you.

Any questions regarding the above Medicaid policies should be directed to your program manager in Columbia at 253-6134.

PRO UPDATE

Request to Help Your Hospital

The SC chapter of the Healthcare Financial Management Association has requested we inform you that SC hospitals would have faster access to approximately \$33 million dollars on any given day if the attestation statement and final diagnoses were provided more timely by physicians. Contact your program manager if you have any questions.

AIDS UPDATE

DHEC Retrovir Program

The DHEC Retrovir Program has been reinstated and new applications are now being accepted. DHEC will continue to use the income eligibility sliding fee scale, but has slightly revised the application form. Under the revised program, priority acceptance will be given to HIV+ persons with T4 (CD4) Lymphocyte counts ≤ 500 . Applications may be picked up at local health departments and mailed to G. Larry Sandifer, Bureau of Preventive Health Services, DHEC, 2600 Bull St., Columbia, 29201. Direct questions to Mr. Sandifer at 737-4040, in Columbia.

SCMA MEMBERS' INSURANCE TRUST

Are you aware that the SCMA has a health insurance plan available to all SCMA members and their office staffs? The Members' Insurance Trust is a self-insured program administered by the SCMA. All claims are paid directly from the SCMA office. The plan is provided as a service to members and is not for profit. When insured by the MIT, SCMA members and their office staffs under the age of 70 are also covered under a new \$10,000 life insurance benefit.

If you would like additional information, please call Geri Galloway or Linda Nelson at the SCMA office.

SCMA ANNUAL MEETING, APRIL 25 - 29, 1990

By this time you should have received a mailing from the SCMA office regarding the 142nd Annual Meeting of the SCMA, to be held April 25-29, 1990 at the Omni Hotel in Charleston. Included in the mailing is a brochure describing meeting highlights, SCMA registration form, and hotel reservation form. You must make reservations at the Omni prior to March 20 to receive the special rate of \$135.00 (single or double). After March 20, the rate will be \$160.00. When registering for the meeting, note there is no registration fee for SCMA members.

Scientific sessions begin with workshops on Wednesday afternoon on "RBRVS Update" and "AIDS/OSHA Regulations". Plenary sessions will be held on Thursday afternoon and Friday and Saturday mornings. A total of 18.5 AMA Category I CME credits will be available.

President-elect John W. Simmons, MD, has announced that special speaker for the Presidents' Banquet on Saturday evening will be noted physician-author Ferrol Sams. Sams is the author of two novels, Run with the Horsemen and its sequel, The Whisper of the River, as well as two collections of stories entitled The Widow's Mite and The Passing: Perspectives of Rural America. His works have all been regional bestsellers and have sold more than 350,000 copies in hardcover and paperback. A graduate of Mercer

University and the Emory University School of Medicine, Sams now lives in Fayetteville, Georgia where his family has lived for generations. He has been a practicing physician in Fayetteville since 1951, and is currently Medical Director of the Fayette Medical Clinic. He and his wife, Helen, have four children and ten grandchildren.

For additional information regarding the Annual Meeting, contact Debbie Shealy at SCMA Headquarters.

WORKERS' COMPENSATION MEDICAL SEMINAR

The 11th annual Workers' Compensation Medical Seminar will be held May 4-6, 1990 at the Myrtle Beach Hilton. For further details call the Medical Division of the SC Workers' Compensation Commission at 737-5741 in Columbia.

RESOURCES AVAILABLE

"Just Listen: Living with Medical Choices" is a 58-minute color video presentation which focuses on health-care decisions and how they are made. "Just Listen" explores such issues as termination of life-support systems, Living Wills, care of premature infants, and equity in delivery and finance of health care. The videotape is available on loan by calling Kim Fox or Joy Drennen at SCMA Headquarters.

The AMA's Department of Substance Abuse and the Office for Substance Abuse Prevention have published a brochure, "The Busy Physician's Guide to the Management of Alcohol Problems." To receive the guide, call the AMA Dept. of Substance Abuse at 312-645-4545. Single copies are free and bulk copies are available at cost, \$38 per 100, including shipping and handling.

AIDS Monographs from the Informational Reports of the AMA Council on Scientific Affairs (December, 1989) are available on loan from SCMA Headquarters by calling Kim Fox or Joy Drennen.

CAPSULES

The following SCMA members have received a special commendation from DHEC for their leadership efforts in improving access to health care for South Carolina mothers and children: O. Marion Burton, MD, Anderson; Michael Watson, MD, Bamberg; Thompson Gailey, MD, and Ernest F. Krug, III, MD, Greenville; Hunter E. Woodall, MD, Fairfax; Thomas C. Rowland, Jr., MD, and Albert P. Thomas, MD, Columbia; Clarence E. Coker, MD, George C. Aycock, Jr., MD, and Edward C. Keith, MD, Manning; David Keith, MD, Union; Francis E. Rushton, MD, Beaufort; Karen Sue Heath, MD, Dillon; Reginald Daves, MD, Conway; William F. Young, MD, Sumter; John Phillips, MD, and William Revells, MD, Rock Hill.

THE FATE OF THE FORESKIN

SAMI B. ELHASSANI, M.D.*

Ye shall circumcise the flesh of your foreskin; and it shall be a token of the covenant betwixt me and you.

Genesis 17:11

"Newborn circumcision has potential medical benefits and advantages as well as disadvantages and risks. When circumcision is being considered, the benefits and risks should be explained to the parents and informed consent obtained."¹

The aforementioned statement was released by The American Academy of Pediatrics on March 10, 1989, modifying a 1971 and a 1975 updated policy stating "There is no absolute medical indication for routine circumcision of the newborn."²

The position on circumcision is continually changing, and many questions are still unanswered. The purpose of this paper is to review the associated complications and recent literature in addition to identifying the present status of the operation.

Practiced originally as a religious, cultural, or fertility rite by both the ancient Egyptians and the Semites who migrated from Babylon into northern Mesopotamia, and later adopted by Jews, Christians, and Moslems, circumcision remains the most common surgical procedure performed in the United States³ and probably the world. As in any surgical operation, minor as well as major complications may occur. Such complications include hemorrhage, infection, and errors in surgical technique. The most frequently observed complication is hemorrhage due to inadequate hemostasis or related to family history of bleeding disorders such as hemophilia A. Rarely encountered in recent years is bleeding from the circumcision site due to hemorrhagic disease of the newborn because of the routine administration of Vitamin K to all neonates. Being a denuded area in the skin, the circumcision site

may be a potential portal of entry for microorganisms in the blood. Post-circumcision infection may present clinically as localized pus formation and erythema or in rare cases as severe bacteremia due to group B streptococcus,⁴ necrotizing fasciitis,⁵ and extensive gangrenous ulceration of the penis and scrotum.⁶ Faulty surgical techniques may result in the removal of too much (Fig. 1) or too little of the foreskin (Fig. 2).

Improper use of electrocautery may cause significant cicatricial burns with skin destruction (Fig. 3).

The most widely quoted retrospective cohort studies of U. S. Army dependents demonstrating a relationship between noncircumcised children and urinary tract infection was reported by Wiswell et al.^{7, 8} The authors documented a 10-fold to 20-fold greater risk of the



FIGURE 1. Post circumcision showing excessive foreskin removed.

* 751 North Church Street, Spartanburg, S. C. 29303.



FIGURE 2. Incomplete circumcision.



FIGURE 3. Cautery-related injury.

infection in the uncircumcised infants in the first few months of life. In addition, Herzog⁹ has shown that noncircumcision seems to be a highly significant risk factor for urinary tract infection in infants up to 12 months of age affecting infants regardless of race and socioeconomic status, and is associated with anatomic abnormalities in 26 percent of cases.

In summary, I recommend the following approach to circumcision:

1. A thorough history taking and complete physical examination of the infant should be performed, paying special attention to any family history of bleeding dyscrasias, signs of congenital anomalies, especially neural tube defects or hypospadias (Fig. 4).
2. The procedure should be explained to the parents, emphasizing the expected normal outcome in the majority of infants and the possible benefits (Table 1) of the procedure. In addition, the potential risks

(Table 2) of the operation in a few babies should be outlined.

3. For the first few hours and days post-operatively, the circumcision site should be watched for bleeding or infection.
4. Circumcision is contraindicated in any sick infant.
5. The site should be kept dry and clean.
6. Religious, cultural beliefs, and traditions of the parents should be respected in decision making on circumcision.
7. Strict guidelines set forth by each hospital as to when and how to perform circumcision is one of the most effective methods in the prevention of minor as well as major iatrogenesis in circumcision. Such hospital measures include strict aseptic measures during and after the operation, application of proper surgical techniques and frequent postoperative examination for signs of bleeding, infection and meatal stenosis. □

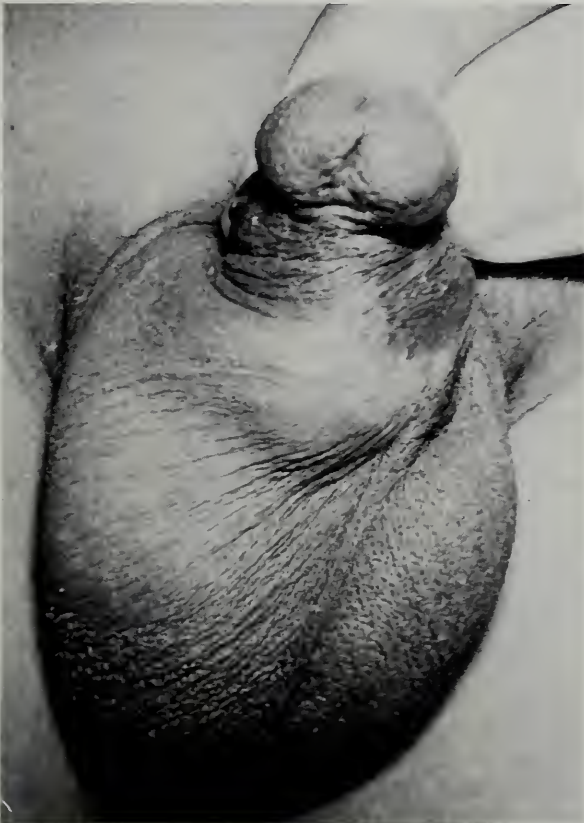


FIGURE 4. Circumcision in a 10-year-old boy with hypospadias.

TABLE 1

Benefits of circumcision

- a. Prevents phimosis, paraphimosis, and balanoposthitis.
 - b. Decreases the incidence of penile cancer.
 - c. Meets the religious and cultural beliefs of parents.
 - d. Has possible psychologic benefits during adolescence.
 - e. Reduces the risk of sexually transmitted diseases.
 - f. Reduces the risk of cervical cancer in the conjugal partner.
-

TABLE 2

Potential risks of circumcision

- a. Local and rarely general infection.
 - b. Hemorrhage.
 - c. Faulty surgical techniques.
 - d. Complications related to local or general anesthesia.
 - e. Pain due to the procedure.
-

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FAST MEDICINE AND HIGH-TECH HEALING

REV. JOE BAROODY, D.MIN.*

Dr. William Osler, Chairman of the Department of Medicine at the Johns Hopkins Hospital at the turn of the century, stated that his cures of organic diseases were not due to any prescribed treatment, but to the patient's faith in the effectiveness of the treatment and the comfort provided by good nursing care. After becoming Regius Professor of Medicine at Oxford University in England, he restated this conviction by claiming that much of his success as a healer was due to aspects of his personality and behavior that were independent of his scientific knowledge of medicine. He often used the expression "faith healing" by which he meant the psychological influences that set in motion the restorative mechanisms of "vis medicatrix natural" or the "healing power of nature"—in effect self-healing.¹

While few physicians of that time challenged Dr. Osler's view of healing, he nonetheless made this statement when very little knowledge of technology existed. Physicians today, however, face a problem when attempting to reflect this style of healing in the modern hospital setting. High-tech equipment like MRIs, CT Scans, Cardiac Caths and Lithotripters provide patients with fast medicine and high-tech healing. Just as few physicians came to challenge Dr. Osler's "faith healing," few today challenge the enormous strides of modern medical technology. But while these benefits are numerous, they also pose a threat to the physician's role as healer. To restate and supplement Dr. Osler's original views, we might say that the cures of organic diseases today are due mainly to such things as the patient's faith in the effectiveness of high-tech machinery, good nursing care as well as the personality and behavior of the physician. Therefore, the healing process continues to require the interaction between the patient and the physician at least as much as the treatment provided by high-tech machinery. The physician remains in the

best position to influence the patient's faith in the effectiveness of the treatment provided by the machine. However, the machine too often replaces the physician in the healing role, thereby compromising the effectiveness and acknowledgment of what really heals. At times, both physician and patient spend more time interacting with a machine than with each other. As a result, the personal healing touch of the physician becomes secondary to the cold hard contact of fast medicine and high-tech healing—and healing becomes reduced to the mechanized treatment of symptoms.

Finding a solution to this pervasive problem is no simple matter. It cannot be a matter of preference. To be a healer, a physician cannot be satisfied with ordering tests, interpreting results and explaining those results in terminology that defies understanding by an anxious patient. Nor can healing be done without the benefits of high-technology and the fast medicine it offers. The answer must come through finding an appropriate balance. To be a compassionate healer, today's physician must personally integrate the high-tech treatment of symptoms with a genuine respect for the healing power of the physician/patient relationship. This requires the establishment of the physician/patient relationship as the primary catalyst of healing and the high-tech treatment of symptoms as a means to that end rather than as an end in itself.

This solution, however, is easier said than done. The fast pace of our hospitals today is only a microcosm of the fast pace of society in general. Our culture promotes and rewards moving fast as crucial to staying ahead. Thus, we have fast food at fast food restaurants, fast money at automatic tellers, fast information from computers and fast religion from fast-talking televangelists. The fast pace and success it promises puts any physician under enormous pressure to conform and makes it too easy to over-emphasize fast medicine and high-tech healing. Putting this solution into action requires making better use of the physi-

* Pastoral Services, McLeod Regional Medical Center, 555 East Cheves Street, P. O. Box F-8700, Florence, S. C. 29501.

cian's valuable, but limited time. The following "ABCs" of the physician/patient relationship suggest a practical way for the physician to get the maximum benefit out of the time available he or she has to spend with the patient.

Hospitals, like the rest of American society, move at a fast pace today. With the use of high-technology they offer fast medicine for fast healing. However, fast medicine and high-technology are often allowed to replace the healing touch provided by the physician in the context of the physician/patient relationship. The dilemma faced by the physician is not one

of choosing between high-technology and the physician/patient relationship, but rather how to combine the two so that the art of healing as described by Dr. William Osler is preserved. As a practical way of doing this, I offer these ABCs of the physician/patient relationship and hope they will be of benefit to physicians who choose to use them. □

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ABCs OF THE PHYSICIAN/PATIENT RELATIONSHIP

- A —*Assume* that the patient needs your presence as much as your prescriptions.
 - B —*Be* friendly.
 - C —*Compassion* can heal.
 - D —*Do* not appear to be in a hurry.
 - E —*Every* patient is a person, not a symptom.
 - F —*False* optimism breeds distrust.
 - G —*Go* out of your way to communicate effectively.
 - H —*Hold* your tongue and the patient's hand.
 - I —*Invest* in small amounts of quality time with your patient.
 - J —*Just* being there makes a big difference.
 - K —*Kindness* is powerful medicine.
 - L —*Listen*, listen, listen to your patient and yourself.
 - M —*Medical* care means personally caring.
 - N —*No* doctor knows it all.
 - O —*Observe* the patient's nonverbal behavior before you talk.
 - P —*Pity* robs the patient of dignity.
 - Q —*Questions* from the patient are important.
 - R —*Respect* reaps rewards.
 - S —*Serving* the patient's needs is your primary purpose.
 - T —*Treat* the person with the symptoms, not the symptoms in the person.
 - U —*Understanding* is what the patient needs most.
 - V —*Value* the patient's privacy.
 - W —*Work* hard at using terminology that the patient can understand.
 - X —*X-ray* your own health periodically. You never know when you may need a doctor.
 - Y —*You* serve the patient, the patient does not serve you.
 - Z —*Zero* in on practicing the ABCs of the physician/patient relationship.
-

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Editorials

HIGH TECH, HIGH TOUCH

We've heard it before, and we'll hear it again: despite our technical progress we must not forget the healing role of the physician's personality. We must not allow medicine to become depersonalized. In this issue, the Rev. Joe Baroody of Florence offers some well-reasoned, practical suggestions in his article entitled "Fast Medicine and High-Tech Healing." He reminds us that our fast medicine reflects a fast society. People seek quicker, more efficient ways to do just about everything and often don't want close personal contact. A few observers suggest that high technology will eventually cause the end of the medical profession as we now know it.

For three reasons, I suggest that the situation is not nearly so bad as sometimes presented, and that such pessimism is unwarranted.

First, the good old days weren't all that good. The Rev. Baroody begins his article by alluding to the ideals of William Osler extant around the turn of the century. We sometimes forget that these were only ideals. Osler's eloquence and twinkling personality were matched by few even in his own day. By 1900—when Osler was in his prime—people were already bemoaning the decline of the wise, compassionate family physician. By 1915, affluent citizens in the larger cities usually preferred specialists.¹ Nostalgic myth had already begun to enshroud the concept of the physician as compassionate healer.

Even Osler is perhaps not an apt role model for most of us. As happens with many great men, we confuse William Osler the man with the ideals projected in his writings and by his many followers. Few of us enjoy what for Osler was a tremendous advantage: to have been the youngest son in a large and caring family. Now understood in Adlerian terms, this unique birthright enables its possessor to "read the vibes" and relate to others quickly, effectively, and humorously. It might comfort us to know that not everybody was pleased even by Osler's bedside manner.² We should also remember

that Osler cautioned his students against making definite diagnoses when they could not prove them, and against the severe limitations of his day's pharmacopoeia. I suspect that he would have gladly chosen our day for his.

Second, the present isn't all that bad. Today's hospitals and physicians' offices are much friendlier and less imposing places compared to their predecessors of only a few decades ago. The increasing sophistication of our technology finds a parallel in the increasing warmth of the health care setting. We have piped-in soft music, warm colors, and—yes, soft and warm touch.

That the technical and humanistic aspects of medicine should develop in parallel is predictable. John Naisbitt called this parallel "high tech/high touch" in his best-seller, *Megatrends*:

... Whenever new technology is introduced into society, there must be a counterbalancing human response—that is, *high touch*—or the technology is rejected. The more high tech, the more high touch.³

Perhaps the most spectacular testimony to Naisbitt's principle has been the rise of family practice as a specialty. Several decades ago, as everyone talked about the potentials of organ transplantation and open-heart surgery, it was widely predicted that general practice would soon be obsolete. Today, patients are gently guided through a maze of technology by a thriving new breed of family practitioners. The success of the family practice movement illustrates how people still need the reassurance of "high touch"—and that we are providing it to an ever-increasing extent.

Third, the future looks bright. Our technology will give us still-better and safer diagnostic and therapeutic modalities. Yet we will be using much of the sophisticated technology in the outpatient setting and even in patients' homes. Patients who require hospitalization will be served by care-givers far better-trained

than their predecessors to offer compassion and empathy. The rise of hospital pastoral care as a specialty within the ministry bears witness to this trend. Nurses, social workers, and many others understand the theory and practice of "high-touch" just as they appreciate "high-tech." But what about us?

This past holiday season, I was moved by two notes. One came in a book inscription: "Thank you for letting me die gracefully." She died Christmas Eve. The other came from parents whose son died five years ago: "We will never forget you and your kindness." In both instances I had stood by helplessly, with nothing to offer but compassion. *Nobody* wrote: "Thank you for your deft use of synergistic antibiotic combinations." Perhaps—just per-

haps—our predecessors are remembered especially for their compassion because they so often had little else to offer.

Personally, I thank the Rev. Baroody not only for writing down his ABCs but also for forcing me to ask this question: which is more important, competence or compassion? I'm contemplating the issue now—as an editorial for the April issue. Tune in.

—CSB

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The Journal continues to welcome case reports of interesting observations by practicing physicians. In this issue, Dr. Stephen J. Bott of Rock Hill provides a concise, well-written account of an important, recently-characterized entity: collagenous colitis. In the following editorial, Dr. Rajeev Vasudeva offers a perspective on this entity in the differential diagnosis of chronic watery diarrhea. Opinions expressed in guest editorials do not necessarily reflect the opinions of members of the Editorial Board or of the South Carolina Medical Association.

—CSB

COLLAGENOUS COLITIS

Chronic diarrhea is a problem that is frequently encountered by the clinician. The most common causes are irritable bowel syndrome, inflammatory bowel disease, malabsorption syndromes, drug induced diarrhea and less often parasitic and fungal infections. Most of these are readily diagnosed by a careful and thorough history and physical examination and appropriate diagnostic studies. However, a few patients remain undiagnosed after an initial evaluation and require further investigation of the problem. As emphasized by Dr. Bott elsewhere in this issue, some of these patients prove to have a recently described entity: Collagenous Colitis.

Collagenous colitis was first described by Lindstrom in 1978. Subsequently, four more cases were reported in 1980 and in 1981. This entity was considered rare, and in fact certain authors were even reluctant to consider it a new entity at all. However, since then, there has been a dramatic increase in the number of

cases reported with this entity suggesting that it may not be a rare condition as once thought.

Does this reflect an increase in the incidence of this new clinicopathological entity or is it being diagnosed frequently and relatively, with more ease? The latter is probably true and the reasons may be several fold. The relative ease of endoscopically examining the colon, the acquisition of random biopsies despite the macroscopically normal colonic mucosa and certainly, the increased awareness of the entity by endoscopists and pathologists are probably responsible for this apparent increase in frequency. At this juncture, the importance of obtaining random biopsies in an otherwise macroscopically normal colon in every patient who requires endoscopy for evaluation of diarrhea is exemplified by the case report presented in this issue. A variety of abnormalities may be revealed by obtaining biopsies of apparently normal mucosa in a patient with diarrhea, such as infectious and idiopathic types of

inflammatory bowel disease,^{1, 2, 3} amyloidosis and microscopic melanosis coli suggesting surreptitious laxative abuse.^{4, 5} Several authors have suggested unequal distribution of the subepithelial collagen band throughout the colon even to the point of relative rectal sparing.^{6, 7} In addition, there are reports of regression of collagen and decrease in inflammation on repeat biopsies^{8, 9} thus making the diagnosis even more obscure. Therefore, it may be important to obtain multiple biopsies rather than a single one, colonic biopsies rather than rectal alone and perhaps repeat biopsies if the diagnosis remains obscure although suspected.

Since the predominant symptoms in patients with Collagenous colitis are non-specific and may spontaneously resolve clinically and histologically, it is not surprising to note that there is a prolonged period varying from months to several years before the diagnosis of Collagenous colitis is made.¹⁰ These patients are often labelled as suffering from irritable bowel syndrome and are treated symptomatically with antidiarrheals, as is also exemplified by the case presented in this issue. The expeditious use of endoscopy and the acquisition of biopsies in suspected cases would certainly help to resolve the issue sooner and this would especially pertain to middle-aged women. Another note of caution would be to make sure that such patients with chronic diarrhea are not surreptitiously using laxatives or diuretics since it is more prevalent in this patient population.

Treatment of this condition has been disappointing. Although, there are numerous reports of initial response to sulfasalazine,¹⁰ corticosteroids,¹¹ mepacrine¹⁰ or metronidazole,¹² the effect does not seem to be sustained and patients will inevitably relapse as is exemplified by the case presented in this issue. Until there is a better understanding of the etiology and pathogenesis of collagenous colitis and the availability of more effective therapy, a trial of sulfasalazine two to three gm/day as tolerated is recommended.¹⁰ The drug therapy should be continued for a few months if improvement does occur and the dose can be titrated thereafter. Corticosteroids may be used in patients unresponsive to sulfasalazine. A trial of Metronidazole¹² or oral 5 ASA¹³ may

be justified in selected cases as is the use of antidiarrheals like Loperamide for symptomatic control.

In summary, the case report by Dr. Bott in this issue illustrates an emerging diagnostic consideration among patients with chronic watery diarrhea. In the coming years, there will be a continuous rise in the number of cases reported, as long as there is an increased awareness of the entity by clinicians and pathologists. It is hoped that major advances in the understanding of this entity will result in more effective therapy in the future.

RAJEEV VASUDEVA, M.D.
Department of Medicine
University of South Carolina
School of Medicine
2 Richland Medical Park
Columbia, S. C. 29203

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Letters to the Editor

HOW GOOD IS THE PAP SMEAR?

To the Editor:

We read with great interest the October 1989 article by Dr. William T. Creasman entitled "How Good (or Bad) is the Pap Smear?" This was a well written, useful review which accurately portrayed the pap smear's contribution to decreasing the incidence of cervical cancer mortality while acknowledging continued areas for improvement.

The issue of cervical cancer mortality and its preventability certainly remains a major public health issue for those of us practicing medicine in South Carolina. Indeed, the September 29, 1989, issue of *Morbidity and Mortality Weekly Report* notes that from 1984 to 1986, South Carolina ranked number one among the 50 states in cervical cancer mortality, following behind only the District of Columbia.

It is also important to keep in perspective the relative importance of the pap smear as a factor in preventable cervical cancer. A unique community study of preventable factors in cervical cancer was reported from San Diego, California in 1972 (Martin, P. L., How Preventable is Invasive Cervical Cancer?, *American Journal of Obstetrics and Gynecology* 113:541-548, 1972) and probably provides the best available insight into this question. An ad hoc "Study Committee for Preventable Factors in Cervical Cancer" of the San Diego Medical Society reviewed in depth all 76 cases of invasive cervical cancer that were diagnosed in San Diego County and Imperial County during the year 1967. Preventable factors, possible or probable, were found in all but three of 76 cases and were assigned to the patient herself, the clinical physician, the laboratory, and to the community itself regarding availability of care. Many cases had multiple factors, but the leading cause of preventable factors was the patient herself in 58 of 76 cases. Clinical physician errors, next in frequency, were assigned by the committee in 42 cases, more than half of the series. The third most common assignment of preventable factors was to the laboratory, 34 cases. In 16 cases it was believed by the committee that if the community itself had developed higher standards of hospital care, more

public cancer education, and better known free diagnostic services for cancer control, invasive stages could have been prevented or detected much earlier. In attempting to decrease cervical cancer mortality in South Carolina, it is important to focus on all these separate factors.

Another important factor concerns the depth of public support for quality assurance in the performance of pap smears. Dr. Creasman notes that a Pulitzer Prize-winning series in the *Wall Street Journal* in 1987 focused national concern on the issue of pap smear quality. The *Wall Street Journal* series focused attention on a large mail-out cytology operation in Texas, a so-called "pap-mill," which appeared to exemplify poor practice standards in cervical cytology. Readers may be shocked to learn that now, two years after the Pulitzer Prize-winning series, the South Carolina Health Department has contracted with this Texas laboratory as the major supplier of cervical cytology services for women seen in South Carolina's Health Department clinics. This arrangement suggests that either the *Wall Street Journal* series' portrayals of the Texas laboratory in question were in gross error, that there have been well-documented surprising improvements in this laboratory's practices, or that the issue of how good (or bad) is the pap smear is actually of very little concern.

Pap smear quality and other known preventable factors in cervical cancer need to be thoughtfully examined in the state, and the health department system would appear to be a fruitful area in which to begin analysis of these factors in South Carolina. This would be a worthwhile first step in attempting to reverse our lamentable ranking regarding cervical cancer mortality.

R. MARSHALL AUSTIN, M.D., Ph.D.
G. FREDERICK WORSHAM, M.D.
Charleston Pathology, P.A.
Roper Hospital
316 Calhoun Street
Charleston, S. C. 29401

REFERENCE

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The letter by Drs. Austin and Worsham was referred to Dr. Creasman, whose response follows:

I appreciate very much the opportunity to reply to Drs. Austin and Worsham's letter. There is no question that we in South Carolina have a problem in regards to carcinoma of the cervix. When we note that South Carolina is #1 in the United States in regards to cervical cancer deaths, we obviously have a lot of work to do. As I alluded in my paper, this should be a potentially preventable disease. The quality of the Pap smear in regards to both the collection and interpretation was addressed in my manuscript. Interpretation is extremely important and has been extensively discussed.

Probably the greatest impact in regards to decreasing the incidence and mortality from carcinoma of the cervix is to improve screening. This should include every adult woman in the state of South Carolina and be done at optimal frequency. Many studies note that women who have never been screened have four times greater the chance of having carcinoma of the cervix than those screened. A good example of the benefits of screening is illustrated in the Nordic countries. Iceland has targeted their entire population and the death rates from cancer of the cervix decreased by

80%. In contrast, Norway targeted only 5% of their population and have seen only a 10% reduction in mortality. Therefore, it is incumbent on those in the medical profession as well as government to make sure that our population is adequately covered. The cost of prevention obviously is money saved compared with treatment and lost of productive lives.

Compliance in regards to individuals obtaining frequent Pap smears has always been a problem. In order to be able to decrease the incidence and mortality from carcinoma of the cervix in South Carolina an active strong educational program is needed to ensure that our population understands the benefits and needs for cervical screening. Only when all of the above are accomplished will we be able to remove ourselves from the obvious detrimental position of being #1 in the country in regards to cervical cancer deaths.

WILLIAM T. CREASMAN, M.D.
Department of Obstetrics and
Gynecology
Medical University of South Carolina
171 Ashley Avenue
Charleston, S. C. 29425-2233

In addition, the letter by Drs. Austin and Worsham was shared with Dr. Harold Gabel at the Department of Health and Environmental Control (DHEC), whose response follows:

To the Editor:

We in public health appreciate Dr. Creasman's discussion of a problem which is so much a part of our prevention efforts in South Carolina. We advocate his approach with our health department clinic patients. The reduction of cervical cancer mortality is a goal that all health care providers in South Carolina, public and private, are striving to achieve. The need is especially great in the indigent who experience an overall 25% greater cancer mortality than those who can afford to pay for care and seek it early. We all need to work together to solve the problem for all patients. With that in mind, I was dismayed by the lack of understanding evidenced in Drs. Austin's and Worsham's letter also appearing in this *Journal*.

The South Carolina Department of Health and Environmental Control (DHEC) provides

pap smear screening to about 100,000 medically indigent women a year. The decision as to which laboratory to use is not an easy one. The Department must search for quality at a reasonable cost since resources are quite limited. The decision to use the Texas Laboratory, referred to by Drs. Austin and Worsham, was not a hasty one and the laboratory was investigated carefully, including an on-site visit by DHEC staff. The final choice was made only after an appeal to instate laboratories yielded only one willing to provide cytology services to our clinic patients. I assume this was due to a lack of cytotechnologists.

The International Cancer Screening Laboratories, Inc. (ICSL) of San Antonio, Texas was selected to provide pap smear interpretation services for DHEC. They meet all conditions

for "doing a good job" as stated by Dr. Creasman. In addition, they met certification requirements of the state of South Carolina as well as having been approved by the Health Care Financing Administration (HCFA) and participate in the interlaboratory comparison programs conducted by the College of American Pathologists. Their cytotechnologists are well trained and have an average of 12-14 years experience. Each reads between 70 to 100 slides per day.

Quality control is performed by the three Board Certified pathologists. All have extensive experience in cytology. Twenty percent (20%) of negatives are rescreened as well as an additional 7% which includes negatives with a previous abnormality, cases showing cytopathic effects of herpes and chlamydia and smears thought to be unsatisfactory. All abnor-

mals are reviewed by a pathologist.

In a pap smear-biopsy correlation ongoing study done by the State of Louisiana with International Cancer Screening Laboratories, Inc. there is a 90% correlation between cytologic evaluation and colposcopy/biopsy findings.

In addition, all slides are available to be reviewed by physicians in our state by dialing an 800 number and requesting them. Consultation with an ICSL pathologist is also available.

I hope that as a result of Dr. Creasman's article and the interest it has generated, we can intensify our efforts to work together to provide cervical cancer prevention, treatment and rehabilitation services to all women in South Carolina.

HAROLD D. GABEL, M.D., M.P.H.
*Assistant Deputy Commissioner
for Health Services*

TESTING FOR INHALANT ALLERGIES

To the Editor:

I would like to take issue with some of the statements presented in the September 1989 issue by Drs. Hoang and Mahon in the article "Inhalent Allergies: Skin Versus In Vitro Testing." While most clinical allergists would agree that no in vivo or in vitro test is as diagnostic as a history and physical examination, most would disagree with both the routine use of in vitro RAST testing and skin end point titration. The inappropriateness of this latter method of diagnosing and treating clinical allergic problems has been clearly defined in the literature. Federal guidelines prohibit the reimbursement under the CHAMPUS program and other federally funded programs for end point titration. This decision was primarily based on the classic study done at Johns Hopkins University School of Medicine. In this study, it was determined that the Rinkel method of immunotherapy with titration of ragweed pollen extract was no more effective than placebo.

The advent of major breakthroughs in the knowledge, diagnosis and treatment of allergic and immunological diseases has provided the clinician with good scientific support for certain treatment methods and has negated the

others which had been used on an empiric basis. The differences between the diagnostic and treatment techniques used by Board Certified clinical allergists and otolaryngological surgeons are not a reflection of "turf war" but rather an attempt to establish what is good medical practice. When objective evaluations of the literature lead to a clear superiority of one method of treatment over the other, it would seem appropriate for physicians to discontinue the use of anecdotal and unproven methods and consider the acceptance of scientifically proven techniques. The field of clinical allergy has come a long way in the past few years. Up to 18% of the general population is affected by some form of this disease. We cannot afford to offer these patients less than optimal care. In my judgement, critical scientific analysis does not support the continued use of the Rinkel technique.

CHARLES H. BANOV, M.D.
Clinical Professor of Medicine
Medical University of South Carolina
172 Ashley Avenue
Charleston, S. C. 29413

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Dr. Banov's letter was shared with the authors, whose response follows:

To the Editor:

In reply to the letter from Dr. Charles Banov, I would like to make the following comments:

First of all, I would like to agree that history and physical exam of all patients serves the physician and patient well in evaluation of their medical problems. Rarely, however, does this pinpoint the exact antigen or antigens responsible for the symptoms of an allergic patient. It certainly provides no basis for the data necessary to initiate immunotherapy. As to the efficacy of skin end point titration, it is merely one of a wide battery of tests used to detect specific antigens and the accuracy of all of these tests has been questioned from time to time. The panel on allergy of the AMA Council on Scientific Affairs reviewed this in the September 11, 1987 issue. At that time, they considered skin end point titration a useful and effective measure of patient's sensitivity. It should be noted that a member of this panel is one of the authors of the paper to which Dr. Banov refers.

As a matter of general comment on that particular paper, I am really not sure whether it demonstrates remarkable skill in the use of placebo by the investigators or simply poor knowledge and technical expertise in the use of skin end point titration, which is not in common use by this particular group of investigators. I think there is considerable question as to the unbiased objectivity of the investigating group.

Finally, I would like to address the appropriateness of the otolaryngologist in treating allergic ear, nose and throat problems. The majority of our chronic sinus patients are afflicted with inhalant allergies, and we have been engaged in the treatment of this problem throughout our years of practice. The American Academy of Otolaryngic Allergy has been in formal existence since 1941. The members of this body are board certified in otolaryngology. Allergy is included as a large part of our board examination, and the AAOA requires passage of oral and written examinations in order to maintain membership in the Academy.

Donald Nalebuff, an otolaryngologist, is the physician responsible for the refinement of the RAST test's clinical usefulness. I, personally, am grateful to him for that advancement, as we currently use it in our practice for the detection of specific antigen, as well as the basis for vaccine preparation.

Again, thank you for allowing us to contribute this article to the *Journal*. I do welcome comments, such as those submitted by Dr. Banov. Controversy is a lot more stimulating than placid acceptance of statements, and it will certainly prove to be much more beneficial to medicine and society in general in the long run.

ROBERT G. MAHON, JR., M.D.
701 Arlington Avenue
Greenville, S. C. 29601

On the Cover:

INAUGURAL DISSERTATION: CIRCA 1851

Our valentine cover is the title page of an inaugural dissertation submitted in 1851 to the dean and faculty of the Medical College of the State of South Carolina as one of the requirements for graduation. The student's name has been removed, but we believe the thesis to be that of W. L. Hamner from Meriwether County, Georgia.

The 1,858 handwritten theses written between 1825 and 1860 are among the most prized holdings in the Waring Historical Library. Except for a collection of catalogues gathered and bound after the war by a member of the faculty, they are the only pre-Civil War records of the school available; and, as such, provide an invaluable source of biographical information on early graduates.

The subject matter, too, is interesting—a virtually unexplored source of information on medical and social problems in the South of that era. Dr. W. Curtis Worthington, Jr., in his

introduction to a thesis bibliography (in Press), says:

While the science is primitive, the diagnoses frequently vague and generalized (although some were amazingly accurate) and the therapy mostly ineffective or worse, a milieu of professionalism and respect for the best that was available in education was being developed which helped to establish a necessary base for the stirrings of scientific medicine during the late 19th century and its explosion in the 20th.

The Waring Historical Library welcomes inquiries on the theses or any of the other holdings in the history of medicine in South Carolina. Call (803) 792-2288 or write the Waring Historical Library, Medical University of South Carolina, Charleston, S. C. 29425.

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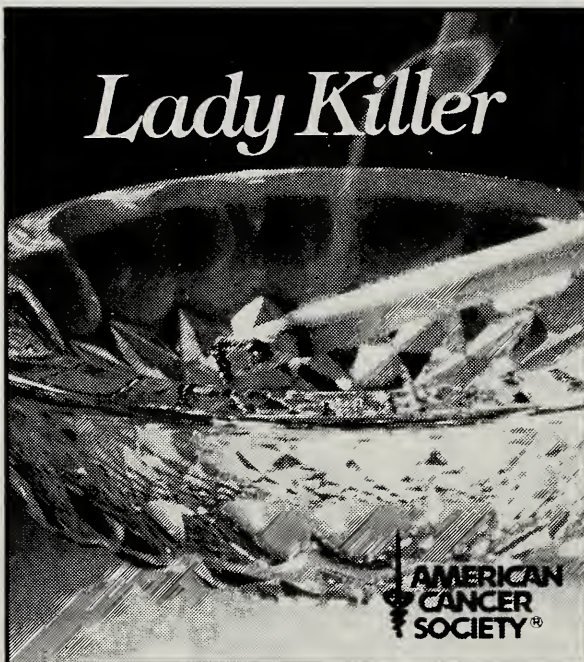
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Auxiliary Page

HAPPY BIRTHDAY HEALTH EDUCATION VAN!

February, 1990, marks the first birthday of the South Carolina Health Education Van. An innovative concept of the SCMA, SCMA Auxiliary, and SCIMER, the van was presented a year ago to the South Carolina Department of Education to provide mobile health education to the state's schools. The efforts and commitment of the medical community have brought to the state an exciting tool to further the vision of the 1988 South Carolina Comprehensive Health Education Act—"To promote wellness, health maintenance, and disease prevention" among all South Carolinians. This act requires that health education be included in the public school curriculum from kindergarten through the twelfth grade. Quality classroom instruction must be provided in community health, consumer health, environmental health, human growth and development, nutritional health, personal health, prevention and control of diseases and disorders, safety and accident prevention, substance use and abuse, dental health and mental health for all grades K-12. Grades 6-12 receive further instruction in reproductive health, family life, pregnancy prevention and sexually transmitted diseases and AIDS education.

Katy L. Wynne, Ed.D. and Bambi W. Sumpter, Dr. PH were employed by the Department of Education as the two health education consultants who have responsibility for the operation of the van and statewide teacher and student programs. Drs. Wynne and Sumpter travel the state with the specialized van which is stocked with portable exhibits of full color and three-dimensional teaching aids on systems of the human body, primarily instructing teachers and students in phases of substance abuse education, reproductive health education, nutrition, pregnancy prevention and sexually transmitted diseases. Response has been tremendous from schools across the state. Van exhibits have also been displayed at health fairs, county fairs, and shopping malls throughout the state, as well as at various conferences, including the 1989 SCMA and SCMA Auxiliary conventions in Charleston.

Over 1,600 South Carolina school district personnel have been involved in some type of comprehensive health education training since the van and consultants "went on the road" in February of 1989. Approximately 3,500 students in grades K-12 have seen the van in action at school health education days, after-school clubs, and educational programs during the spring and fall of 1989. An additional 4,000 students are currently scheduled for van programs in the spring of 1990. Requests for services from the Health Education Van continue to be received weekly at the Department of Education and through various SCMA Auxiliaries across the state.

The future of the Health Education Van is exciting and the opportunities are numerous as we continue our commitment, through mobile health education, to bettering the health and quality of life for the people of South Carolina. The rewards are many for the efforts given!

DR. KATY L. WYNNE, Ed.D.
DR. BAMBI W. SUMPTER Dr.PH
S. C. Department of Education

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CHILD ABUSE REPORTING IN SOUTH CAROLINA, 1975-1987

TIMOTHY J. MADER, M.D.*

Children have been the victims of maltreatment and abuse throughout recorded history. From inappropriately harsh discipline to repeated beatings, torture and murder, children have suffered mistreatment at the hands of parents, caretakers and society. In the latter half of the 19th century, "The Society for the Prevention of Cruelty to Children" was founded in London. This organization brought to light the gruesome conditions under which children were forced to work and described various forms of child exploitation that existed. Child labor laws were created to protect children mistreated in the workplace and gradually, children's status in society began to improve.

The first description of "child abuse" in the medical literature appeared in the late 1800s.¹ The subject gained little attention, however, for nearly 100 years. In the early 1960s, child abuse became a popular topic in the medical literature and lay press, when Kempe and associates² coined the emotional phrase, "the battered child syndrome." Their "landmark article" generated renewed interest in and focused public attention on the plight of abused children. In 1962, the Children's Bureau, a division of the U.S. Department of Health Education and Welfare, initiated an effort to standardize child abuse reporting in the United States. They proposed a "model law" to assist states in generating their own individual reporting legislation.³ By 1968, the

last of the 50 United States had enacted formal child abuse reporting laws.⁴

DEFINITION

Child abuse may take many forms and often several coexist. For conceptual convenience, child abuse may be divided into two general categories, abuse and neglect. (Table 1). Abuse refers to acts of commission by those entrusted with the care of a child resulting in physical or emotional injury. Neglect denotes acts of omission with similar harmful consequences.

INCIDENCE

The true incidence of child abuse in the United States is unknown. Published estimates vary widely and range from 500,000 to over

TABLE 1
CHILD ABUSE

Abuse	Physical abuse
	Sexual abuse and exploitation
	Emotional and mental abuse
	Medical abuse*
	Intentional poisoning
Neglect	Physical neglect
	Emotional and supervisory neglect
	Nutritional neglect
	Educational neglect
	Medical neglect

* Medical abuse ("Munchausen's disease by proxy") is a form of child abuse in which the child suffers from factitious illness induced by the parents.

* Department of Emergency Medicine, Richland Memorial Hospital, 5 Richland Medical Park, Columbia, S. C. 29203.

four million cases per year.⁴ Many authors speculate that the estimates, while far in excess of the cases annually reported, still fail to accurately gauge the magnitude of the problem.

REPORTING

The statute governing child abuse reporting in South Carolina is fashioned after the "model law" proposed by the Children's Bureau. It stipulates that anyone in the health care profession who suspects that a child may be abused or neglected must make certain that the proper child protective services are notified:

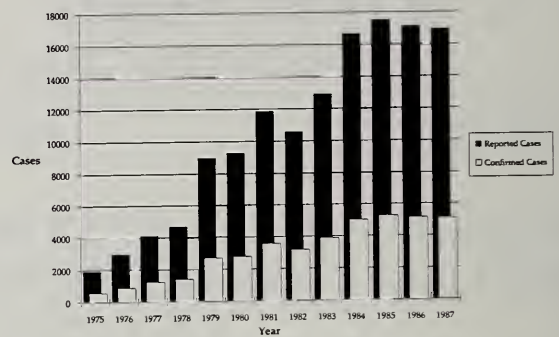
"Any physician, nurse, dentist, optometrist, medical examiner or coroner, or any other medical, mental health, or allied health professional, Christian Science practitioner, religious healer, schoolteacher or counselor, social or public assistance worker, child care worker in any day care center or child caring institution, police or law enforcement officer or any judge having **reason to believe** that a child's physical or mental health or welfare has been or may be adversely affected by abuse or neglect is **required** to report or cause a report to be made in accordance with this section." (South Carolina Child Protection Act of 1984: Sec 20-7-510.)

Failure to comply with the above statute carries criminal as well as civil consequences. Further, the law provides immunity from liability if the report is "made in good faith."

Each year over one million cases of suspected child abuse are reported in the United States.⁵ In South Carolina, over 16,000 cases of suspected abuse are reported annually.⁶ The state office of Child Protective Services in Columbia is charged with the responsibility of compiling and analyzing child abuse reporting statistics.

In 1975 there were 1,927 cases of suspected child abuse reported in South Carolina. During the 10 years that followed, an annual increase of 15% led to a peak volume of 17,544 cases in 1985 (Fig. 1). In 1986 and 1987, the numbers remained stable. Despite the increase in reported cases over the decade, the indication rate (the percentage of cases confirmed by investigators) has remained 30%. The rise in cases reported, therefore, is closely paralleled by an upswing in confirmed cases. Still over

Fig. 1. Annual Number of Suspected and Confirmed Child Abuse Cases in South Carolina Between 1975 and 1987

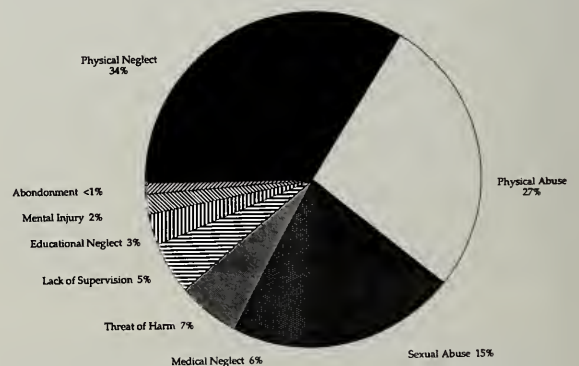


60% of all reports of presumed child abuse cannot be conclusively substantiated.

In South Carolina, three categories of child abuse account for three-fourths of all the reported cases of suspected abuse (Fig. 2). These include physical abuse, sexual abuse and physical neglect. The other six recording categories, medical neglect, lack of supervision, threat of harm, mental injury, educational neglect and abandonment, account for the remainder.

The county distribution of child abuse cases reported and confirmed in South Carolina in 1987 is presented in Table 2. As expected, the counties with the greatest proportion of the population report the most cases. Greenville, Charleston and Richland counties account for a quarter of all the reported cases but every county in the state is represented. The confirmed cases numbered 4,675; an indication rate of 28%, similar to the established trend of 30%. This period's demographic data are also presented in the table.

Fig. 2. Distribution of 51,000 Reported Child Abuse Cases in South Carolina Between 1985 and 1988.



CHILD ABUSE REPORTING

TABLE 2

COUNTY DISTRIBUTION OF CHILD ABUSE CASES REPORTED—1986-1987

	Total Number of Reports	Total Indicated Cases	Sexual Abuse	Physical Abuse	Physical Neglect	Mental Injury	Medical Neglect	Educa- tional Neglect	Lack of Super- vision	Threat of Harm	Aban- don- ment
1 Abbeville	114	44	10	20	73	0	4	5	1	0	1
2 Aiken	971	239	203	327	326	69	75	26	29	90	
3 Allendale	109	25	10	20	59	1	8	5	2	4	
4 Anderson	471	150	106	150	179	8	47	11	32	58	
5 Bamberg	92	28	22	14	37	3	9	3	1	1	2
6 Barnwell	137	44	22	28	78	0	3	0	0	6	
7 Beaufort	338	118	43	104	163	9	25	26	1	2	2
8 Berkeley	739	111	106	211	197	17	59	17	52	69	6
9 Calhoun	53	21	11	14	12	1	7	3	6	3	1
10 Charleston	1319	256	223	423	541	7	77	48	117	281	
11 Cherokee	171	34	19	47	69	5	19	10	1	12	
12 Chester	220	80	20	66	61	11	23	18	59	57	
13 Chesterfield	242	80	30	66	123	14	24	11	9	18	2
14 Clarendon	74	39	17	25	16	1	5	2	6	1	1
15 Colleton	372	105	42	68	150	29	16	9	15	33	7
16 Darlington	346	56	63	78	111	11	38	14	19	25	1
17 Dillon	282	91	9	20	26	2	11	4	15	16	2
18 Dorchester	400	87	70	149	148	60	29	25	12	27	10
19 Edgefield	85	32	13	30	31	6	5	2	1	7	
20 Fairfield	96	20	16	22	27	0	8	5	10	7	1
21 Florence	569	271	71	120	267	4	30	22	48	7	
22 Georgetown	168	50	19	37	59	0	17	4	13	13	3
23 Greenville	1864	479	274	465	812	36	83	88	59	364	
24 Greenwood	207	72	37	66	97	1	20	4	11	15	
25 Hampton	115	33	22	30	58	4	9	10	0	6	
26 Horry	589	118	111	162	211	4	13	27	7	39	10
27 Jasper	84	29	6	15	44	1	10	5	4	2	
28 Kershaw	207	25	26	63	65	2	31	2	11	7	
29 Lancaster	449	150	58	120	176	15	39	19	134	87	
30 Laurens	189	68	40	60	43	2	7	5	18	14	
31 Lee	78	28	10	16	40	5	13	2	1	3	
32 Lexington	745	191	111	238	346	18	41	16	11	346	
33 McCormick	43	13	6	5	8	1	7	0	6	7	1
34 Marion	218	83	26	58	140	3	22	3	0	0	
35 Marlboro	202	109	13	59	75	5	23	6	0	22	
36 Newberry	62	29	10	26	15	0	1	4	3	3	
37 Oconee	279	90	44	80	106	9	4	1	21	14	
38 Orangeburg	392	87	46	86	201	3	33	10	9	4	
39 Pickens	316	166	38	42	31	1	4	11	37	32	
40 Richland	1305	245	141	434	527	44	113	38	79	104	
41 Saluda	107	44	22	28	46	3	15	1	13	12	4
42 Spartanburg	821	257	198	192	218	5	51	66	68	17	
43 Sumter	645	176	70	111	226	2	39	6	17	11	
44 Union	109	49	14	32	39	3	16	5	0	0	
45 Williamsburg	181	54	41	48	83	4	40	11	10	43	
46 York	365	99	42	126	65	2	35	22	56	17	
TOTAL	16,940	4675	2551	4601	6425	431	1208	632	1024	1906	54

RECOGNITION AND INTERVENTION

Child abuse is a spectrum of conditions. Injuries may be relatively minor or quite severe in nature. Some cases may be obvious, but more often they are subtle and easily overlooked. An astute individual with a high index of suspicion can detect the lesser forms of child abuse and intervene before there is an opportunity for progression to occur. Often, children present with apparently insignificant injuries prior to suffering serious intentional trauma. Of all children presenting with minor nonaccidental trauma, 25% of them will suffer subsequent repeat trauma and 5% will eventually succumb to nonaccidental death without appropriate intervention.⁷

There are no economic, social or cultural boundaries in child abuse. All children are potential victims and all caregivers potential perpetrators. There are, however, features which identify families and children at risk (Table 3). The importance of familiarity with the indicators of child abuse cannot be overemphasized. It is essential for all health care professionals to know the signs and symptoms of and learn the risk factors for child abuse.

Recognition and reporting are only two of the important responsibilities of the health care provider who suspects child abuse. In all cases, the care and protection of the child is the first priority. This includes, but is not limited to, resuscitation if needed and eventual hospital admission. Hospitalization is recommended for all suspected victims of child abuse regardless of injury severity. It provides the greatest protection for the child and impresses on the parents the seriousness of the situation.

Filing a report of suspected abuse carries a responsibility to communicate directly with the child's parents to convey to them your concerns and explain your duty under the law. This may be a difficult task but it cannot be avoided. The child's private physician should always be notified to assist in the child's care and to insure appropriate long-term follow-up care. Finally, the actual report must be filed. Often this may be accomplished by simply notifying the Department of Social Services. Most institutions have a social worker on 24-hour call. Meticulous attention to detail in documentation is strongly advised. The department of medical photography can often be

an invaluable asset.

It must be stressed that the role of the health care team is to attend to the child and notify the proper authorities; not to identify or punish the guilty party. For many of us, these cases can be quite difficult psychologically and evoke strong emotions. It is important that all personnel maintain the highest degree of profes-

TABLE 3
CHILD ABUSE:
PREDISPOSING FACTORS

Susceptible Child

- The product of an unwanted pregnancy
- A child who is perceived as a disappointment by the parents in some way (i.e., handicapped or "wrong sex")
- Lack of maternal bonding at birth (i.e., a premature infant)
- The products of a multiple birth
- Age less than 4 years

Parental Factors

- Often abused as children
- Inadequate preparation for their roles as parents
- Isolated living circumstances (i.e., lack of family support)
- Unreasonable expectations for the child
- Poor impulse control
- They have rigid or authoritarian upbringing (i.e., religious fundamentalist or military personnel)
- Low self esteem
- There is often substance abuse
- There may be marital discordance
- Psychiatric illness
- Aggressive Psychopathology may be present
- New liaisons (i.e., single or divorced mother's new boyfriend)

sionalism and objectivity. It is helpful to remember that in some cases, the person who presents with an abused child may be unaware that the child has suffered intentional injury. In some instances, the injuries may be inflicted by other caregivers without the parent's knowledge.

OBJECTIVE

There are two main goals in reporting suspected child abuse. The first is to protect the child and in many cases, the siblings from further harm. As many as 20% of siblings of abused children are also in some way victimized and may require medical attention.⁷ The second objective of reporting is to improve the family dynamics and preserve the family unit. Contrary to what might be expected, most families can safely remain together. The parents, in almost all cases, will be capable of providing adequate child care after receiving comprehensive intensive therapy.⁷ Ten to 15% of families may require long-term supervision and prolonged family therapy, but only 2-3% of all abused children will need permanent placement.⁷

SUMMARY

Child abuse continues to be a tremendous medical and social problem in South Carolina. Hundreds of children are injured each year and some are killed. Many injuries and deaths could have been prevented with timely inter-

vention. Unfortunately the vast resources available in the fight against child abuse are of little value if primary health providers fail to notify the appropriate agencies. Improvements in education, detection, reporting and intervention are the only effective means of reducing the morbidity and mortality associated with child abuse and helping to eradicate it from society. □

ACKNOWLEDGEMENT

I would like to express my appreciation to Marguerite Campbell at the South Carolina Department of Social Services for her assistance in providing much of the data for this article, and to N. John Stewart, M.D., for his review and constructive criticism.

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BONE LOSS AND PHYSICAL INACTIVITY: CAN EXERCISE PREVENT OSTEOPOROSIS?*

C. DAVID TOLLISON, Ph.D.**
MICHAEL L. KRIEGEL, Ph.D.

Osteoporosis is the result of bone loss characterized by decreased mineral mass and an enlarged medullary cavity. Affecting more than six million estimated victims and more than twice as many females as males, osteoporosis is associated with bone atrophy, decreased bone strength, increased fractures, impaired ambulation and increased pain in populations of advanced age.¹

Bone mineral loss is known to be a primary etiological factor in the development of osteoporosis. Mazess² reported that bone loss in aging females from age 30 or 35 years occurs at a rate of between 0.75% to 1% per year. Menopause appears to exacerbate bone loss, perhaps at a rate as high as 2% to 3% per year from onset until five years after menopause.³ This loss occurs primarily on the endosteal surface while bone width appears relatively unchanged. Consequently, women may ultimately lose 30% or more of their bone mineral mass by age 70 years.⁴

In sharp contrast, men are thought to lose bone mass at a significantly decreased rate, perhaps as low as 0.4% per year beginning at age 50 years.² Research suggests that the loss of bone mineral mass generally does not appear symptomatic in males until age 80 years or beyond.

It is known that increased bone mineral mass is positively correlated with increased bone strength, while decreased bone mass is associated with a higher incidence of weakness and fracture.⁵ For example, Chalmers and Ho⁶ reported the rate of hip fracture in a population of 70-year-old women was 50 times higher than

that of a matched population of 40-year-old females. Bauer's⁵ research in the epidemiology of fracture in an aged population revealed that 54-year-old females suffered a rate of fracture in the distal radius that was seven times higher than that of 40-year-old women.

The etiology of bone loss ultimately leading to osteoporosis involves numerous factors, including hormonal, nutritional, genetic and mechanical forces. Muscular contraction, when increased or decreased, is considered a primary mechanical force affecting bone structure and geometric characteristics.³ A variety of investigators⁸⁻¹⁰ have reported that certain physical activities, such as sports and physical labor, generate in participants a local adaptive response specific to the activity.

This paper will review some of the current research on bone atrophy and hypertrophy as a result of physical activity and exercise.

PHYSICAL INACTIVITY VERSUS PHYSICAL ACTIVITY

The effects on bone mineral content of physical inactivity have concentrated on the influence of weightlessness, immobilization and loss of muscle function. For example, astronauts in several of the early Gemini space flights demonstrated small but significant bone mineral loss.¹¹ Other investigations have reported negative calcium balance and decreased bone mineral content in immobilized bedrest subjects. Donaldson, et.al.¹² investigated the effects of prolonged physical inactivity on bone mineral in a study of three young male subjects confined to bedrest for 36 weeks. Results indicated a 39% reduction in bone mineral content as measured by photon absorptionmetry. Rambaut, et.al.,¹³ in a comparative study of direct methods of bone mineral measurement, reported an average bone mineral loss of 1.1% per week in eight subjects immobilized for 24 weeks.

* Patients in this study were evaluated and treated at the Pain Therapy Centers of Greenville (Greenville Hospital System), Columbia (Richland Memorial Hospital), and Florence (Bruce Hospital System), S. C.

** Address correspondence to Dr. Tollison at the Pain Therapy Centers, Greenville General Hospital, 100 Mallard Street, Greenville, S. C. 29601.

The research above is consistent with clinical opinion and suggests that physical inactivity results in bone loss. However, if an association exists between physical inactivity and bone atrophy, then it is logical to expect bone hypertrophy in subjects participating in consistent physical activity. A review of the literature would appear to substantiate this assumption, both in younger and older sampled populations.

Watson¹⁴ assessed bone mineral in the arms of young baseball pitchers. In a study of 203 pitchers between the ages of eight and 19 years, he found a significant bone mineral increase in the humerus of the dominant versus nondominant arms. Jones, et.al.⁴ investigated bone diameter and cortical thickness in the humeri of the nondominant and dominant arms of professional tennis players and discovered a cortical thickness hypertrophy in the dominant arms of 34.9% of the males and 28.4% of the females. In an older population, Dalen and Olsson³ reported significantly greater bone mineral content of 20% in both the femur and humerus of 50 to 59-year-old cross-country runners compared with controls of similar age, height and weight. In a study similar to that of Jones, et.al.,⁴ Montoye, et.al.⁷ utilized both photon absorptionmetry and x-ray to evaluate bone mineral status of dominant and nondominant arms of an older tennis playing population. Sixty-one male tennis players with an average age of 64 years and an average length of tennis participation of 40 years, participated in the study. Results of absorptionmetry indicated a 7.9% hypertrophy of the dominant radius and a 13% increase in the dominant humerus as compared to the nondominant arm. Huddleston, et.al.¹⁵ assessed the dominant versus nondominant arms of 35 male tennis players over the age of 70 years. Tennis participation ranged from 25 to 72 years. Results indicated an 11.4% increase in mean bone mineral mass of the dominant arm.

The results of research appear to support the hypothesis that bone mineral response and hypertrophy are locally controlled and respond to physical activity and exercise. More importantly, age does not appear to particularly limit the benefits of physical activity. Assuming the accuracy of this hypothesis, a question which naturally arises is the length and intensity of

exercise required to maintain bone tissue in a population of advanced age. The investigation that most closely addresses this question was performed in 1981 by Smith, et.al.¹⁶ In this study of 30 women with a mean age of 84 years, 18 subjects served as controls and 12 women participated in an exercise program for three years. Subjects in the two groups were matched on the basis of age, weight and degree of ambulation. The control group made no significant changes in their daily activities during the study while the experimental group participated in a supervised exercise program for 30 minutes per day, three days per week, for three years. The exercises developed for the study were all designed to be performed while sitting in a chair. Measurement of bone mineral content and width of the distal radius was made by photo absorptionmetry 10 times during the 36-month study. The purpose of the study was to specifically assess whether physical exercise would significantly slow bone mineral loss and/or increase bone mineral content in a population of older women.

Results of the three-year study indicated that the exercise group demonstrated a 2.29% gain in the percent of mineral content while the control group had a content loss of 3.28%. The exercise group also demonstrated a 1.71% gain in bone mineral/width during the 36-month study while the control group had a 2.59% width loss.

DISCUSSION AND CONCLUSIONS

The role of physical exercise in the treatment of osteoporosis has yet to be unequivocally defined. However, a number of researchers, including Smith, et.al.¹⁶ and Aloia, et.al.,¹⁷ have reported that physical exercise increases bone mineral content in exercise participants. Smith, et.al.¹⁶ substantiated the increase in bone mineral content in older women participating in a three times per week exercise regimen, while Aloia, et.al.²² demonstrated that bone loss in younger women can be prevented by physical exercise.

While physical exercise is but one of many factors influencing osteoporosis, research documents the effects of physical activity on bone and appears to establish the potential for regular physical exercise in the prevention and management of osteoporosis. □

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COMBINED PHARMACOLOGIC AND EXERCISE STRESS MYOCARDIAL SCINTIGRAPHY: A PRACTICAL METHOD FOR ASSESSMENT OF POTENTIAL CARDIAC ISCHEMIA IN PATIENTS WITH LIMITED EXERCISE CAPACITY

JEFF Z. BROOKER, M.D.*

Exercise electrocardiography has been a time-honored, though imperfect, clinical tool for the evaluation of patients suspected of harboring clinically significant coronary artery disease. Problems with sensitivity and specificity of this method and the increasing awareness of the influence of prior probability of the disease on the predictive value of the test have stimulated a continuing search for other noninvasive, feasible and accurate methods of determining the presence and severity of coronary artery disease in suspect populations.¹ Exercise thallium-201 scintigraphy combined with electrocardiographic monitoring offered an apparent improvement in the sensitivity and specificity of the noninvasive exercise approach to the problem. If nothing else, it allowed the observation of two variables to measure ischemia: ST segment response from the EKG and the evaluation of scintigraphic defects and, if present, whether they were transient or fixed.²

Although these studies have been very helpful in the evaluation of large numbers of patients, there are still imperfections and limitations which are intrinsic to the method and which relate to the reliability of prediction from the results as a function of the prevalence of significant coronary disease in the population tested. This paper does not address these limitations intrinsic to the method. It does propose a workable modification of the testing protocol to allow the inclusion for evaluation of more disabled patients who otherwise could not meet criteria of attaining adequate heart

rate or double product (heart rate X systolic blood pressure) during exercise to obtain a valid test result either by electrocardiography or thallium scintigraphy. The individuals being considered are those who have major limitations to the performance of walking exercise. This includes patients with lower extremity amputation or other orthopedic, neurologic or peripheral vascular limitations to walking. It also includes patients with severe pulmonary disease with dyspnea at rest or with minimal effort or individuals who are severely limited by age and/or multiple medical problems in general but in whom an assessment of ischemic cardiac risk is considered important.

A number of alternate methods of stress electrocardiography and stress thallium myocardial imaging have been proposed in the literature for this cohort of individuals. One approach is, of course, to shift the exercise to the upper extremities. Hand grip isometrics and various arm exercises have been employed.³ None of these has proved to be extremely satisfactory for a variety of reasons. Usually a high enough heart rate or double product is not attained with upper extremity activity given the limitations of overall health and stamina of these patients.

Another approach has been to increase the heart rate by right atrial pacing rather than by any form of exercise.⁴ Such an undertaking, however, involves adding an invasive component and is fairly cumbersome and expensive. Now that external pacemakers are fairly readily available, this form of heart rate control could be considered, but external pacing is uncomfortable to a fully conscious patient and nonphysiologic in its mechanism of heart rate

* 1707 Brabham Avenue, Columbia, S. C. 29204.

increase (produces, in effect, ventricular tachycardia). It would also add cost by virtue of the expense of the electrodes required to produce an adequate interface between the machine and the patient.

Intravenous infusion of positive inotropic and chronotropic agents has been proposed and can work.⁵ Again, however, this alternative is time consuming and requires the presence of an appropriately trained nurse, paramedical observer or the physician himself for safe administration of the stimulant throughout the infusion time. This variation has not generally caught on.

At Providence Hospital in Columbia, S. C., since around 1986, the use of 400 mg. of oral dipyridamole tablets as a pharmacologic differential stimulant to coronary artery flow has been the preferred approach to testing this subset of functionally impaired patients by many of the cardiologists who practice at this hospital. The use of the drug, which incidentally is not at the time of this writing FDA-approved for this purpose, has been helpful but, in my judgment, suboptimal for several reasons.

First, in the English cardiac literature the more widely reported use of dipyridamole for stress myocardial imaging has been via the intravenous route of administration. Intravenous dosing gives a better bolus effect and, therefore, a greater certainty of the optimal time window for injection of thallous chloride. Dipyridamole for intravenous use is restricted as of the date of this paper, however, and this form of the drug has not been available at this writing to Providence or to most hospitals in South Carolina. Second, the intravenous dose is weight-adjusted. The oral dose recorded above has usually been given without regard to the patient's weight and size.

Third, though dipyridamole increases coronary blood flow preferentially in normal coronary arteries compared to stenotic ones, it does not proportionately increase myocardial demand for increased flow.⁶ The extraction fraction, therefore, probably falls. Dipyridamole also does not produce a redirection of blood flow away from the splanchnic viscera, such as the stomach or the large bowel, as does exercise.

Fourth, the duration of action of a large dose of oral dipyridamole often carries it into the

time of acquiring the delayed radionuclide images of the heart.⁷ Therefore, the interpretation of the redistribution can be complicated by uncertainty as to the lingering influence of dipyridamole action. Fifth, I have observed that the prolonged duration of action of a large oral dose of dipyridamole can lead to late attacks of chest pain or angina.

METHODS

I have observed that in most physically disabled patients, even the elderly, those with severe pulmonary disease or lower extremity dysfunction, there is usually some residual walking ability available to them. Also, the author has extrapolated to this application from the generalization that most drugs are more rapidly absorbed by the oral route when taken without competition from food or other drugs and when the particle size of the drug is very small (drug predissolved or suspended before swallowing).

Over the last two years or so, therefore, I have implemented the following dipyridamole exercise stress protocol for testing significantly exercise- or walking-impaired patients for ischemic heart disease in whom the information was felt to be of clinical relevance.

1. The patient is hydrated at home or in the hospital the night before to enhance eventual washout of the isotope from the bladder.
2. No medication is allowed for two (2) hours before testing and food and caloric drinks are withheld overnight. Theophylline, caffeine and diltiazem are withheld, if possible, for 24 to 36 hours before testing. Methylxanthine derivatives neutralize the coronary vasodilating properties of dipyridamole and, in fact, these preparations are used as antidote for the drug.⁸ The half-life of theophylline is 3 to 9.5 hours in most adults. The half-lives of caffeine and diltiazem are somewhat shorter.⁹
3. Baseline electrocardiograms and blood pressures are obtained on the patient as with the usual stress ECG protocols.
4. Five (5) mg/kg of dipyridamole is rounded to the nearest 25 mg. (range 200 mg.-600 mg.) crushed and dissolved-suspended in 20-25 milliliters of vodka, fla-

vored and administered in one or two swallows to the patient. The time is noted.

- 4a. When the intravenous preparation becomes available the intravenous dose is 0.56 mg/kg dissolved in 40 ml of 0.9N NaCl and infused at 0.14 mg/kg/min for four (4) minutes.
5. Serial blood pressures and electrocardiograms are recorded at ten (10) minute intervals for forty (40) minutes after the oral drug or they are recorded with the onset of symptoms or ST segment changes felt to represent cardiac ischemia if a clinical or electrocardiographic endpoint occurs earlier.
6. Forty to forty-five (40-45) minutes post oral dipyridamole or six (6) minutes following the intravenous dose the patient is exercised on the treadmill at whatever level he or she can tolerate from as low as 1 mph, 0% grade to standard stage I of the Bruce protocol for as long as the patient and/or the physician feels is appropriate. Injection of 2.5mCi of thallium-201 is made one (1) minute or so before stopping exercise. Observations of clinical response, blood pressure level and electrocardiographic appearance is performed in the usual fashion for stress electrocardiographic testing.
7. Three (3) minutes of recovery observation with blood pressure sampling at least once during the three-minute interval and electrocardiographic recordings at one-minute intervals are carried out with the patient sitting or supine depending upon the patient's blood pressure and clinical status post exercise.
8. Scanning is then performed with the gamma camera in three (3) planar views (45° LAO, 65° LAO and AP) or by SPECT techniques as with the usual protocol. The patient is supine throughout this time and scanning is completed in less than 30 minutes post exercise and within 80 minutes post oral dipyridamole or 45 minutes post intravenous dipyridamole.
9. Reversal of dipyridamole post initial scanning is then accomplished by having the patient drink one or more cups of

caffeinated coffee (estimate 70-80 mg. of caffeine per cup).¹⁰ Aminophyllin 100 mg. to 200 mg. in 100 ml. of D5W for intravenous use is also available as a "stat" antidote in the event of alarming chest pain, clinical findings or electrocardiographic changes felt to represent ischemia or hemodynamic intolerance to the dipyridamole load.⁸

DISCUSSION

The advantages of this modification overcome many, but not all, of the limitations objected to in the protocol in which a standard 400 mg. of oral dipyridamole tablets is given without considering the patient's size, without any subsequent exercise and without any deliberate termination of dipyridamole action following the initial imaging. The crushed oral dipyridamole is likely absorbed more rapidly and predictably than the oral whole tablets though absorption is still variable with regard to time and completeness.⁷ The intravenous administration of the drug should help standardize this variable.

The dose is adjusted to the size of the patient to give a more uniform effect from patient to patient, at least to the extent that there is a dose response relationship, than would a single dose for all sizes of patients. The addition of even a small amount of exercise usually increases heart rate further than that obtained by administering oral dipyridamole alone and has the added advantage of decreasing drug side effects such as lightheadedness and relative hypotension from the bolus of dipyridamole. It also reduces the splanchnic uptake and increases myocardial oxygen demand. This net effect results in improved myocardial image quality or density of cardiac isotope when compared with previous technique of administering only the fixed dose of dipyridamole in the non-crushed tablets without exercise. (See figures. The thallium scan reproductions were chosen from studies on men of nearly the same age, body size and habitus.)

By using the crushed, dissolved oral dose of dipyridamole and by cutting off the effect of the dipyridamole with coffee (caffeine), the use of intravenous drugs is eliminated insofar as potential provocation of ischemia and administration of the antidote is concerned in the

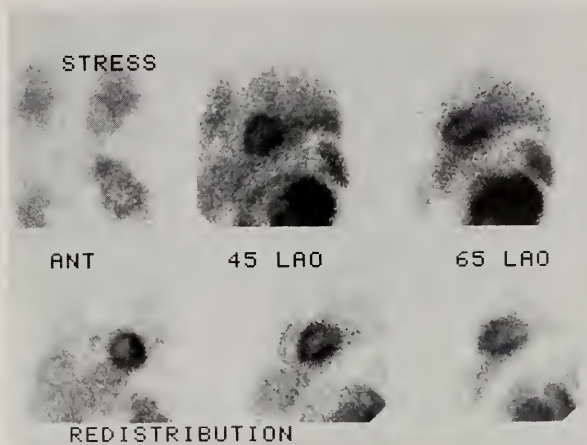


FIGURE 1. Usual Providence Protocol: Patient received 400 mg. of oral dipyridamole tablets, no exercise and no antidote. Note the low target to background ratio and the similarities of cardiac isotope density from stress to delayed images.

vast majority of instances. A nurse or physician, therefore, is not required to administer either the drug or the antidote. More importantly, cutting off the dipyridamole effect after the initial scans have been acquired reduces the likelihood of the patient's having a late attack of iatrogenic ischemia and removes the doubt as to the persistence of dipyridamole effect in interpretation of the delayed or redistribution thallium images.

This method using the crushed, dissolved oral dipyridamole does not overcome all the uncertainty regarding dipyridamole absorption and peak action and does not eliminate the time delay, when using the oral route, between dose administration and imaging. The intravenous form of the drug will greatly reduce these concerns. The presence of a physician or an appropriately trained paramedical attendant is required for the safe implementation of the study with the treadmill exercise added to the oral dipyridamole stimulation and will be for intravenous administration of dipyridamole as well.

Finally, this method is valuable mainly because it extends the application of stress testing

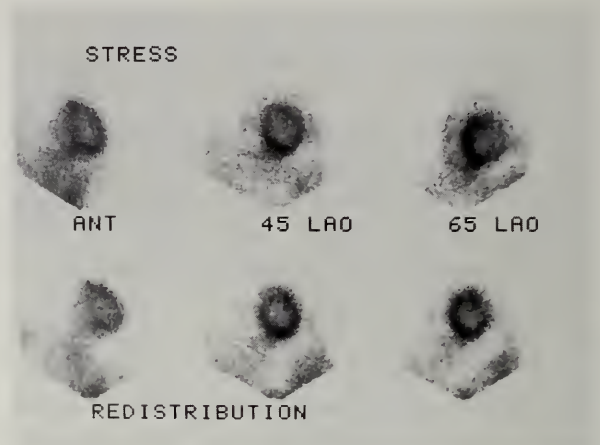


FIGURE 2. Proposed Protocol: Patient received 400 mg. of dissolved-suspended dipyridamole, then exercised. He drank coffee before the delayed scans. Note the improved target to background uptake and the clear change in isotope density and redistribution in the delayed images.

to a subset of patients who are in need of evaluation of their risk from an ischemic cardiac event who could not otherwise be so screened. Similar methods have been safely implemented as reported in the literature and I have thus far observed no fatalities, myocardial infarctions or major disturbances of cardiac rhythm in this subset of patients tested with this protocol. This protocol does not eliminate inherent weaknesses in the method of exercise electrocardiography and thallium myocardial imaging, however, and should be used in an appropriate context.

SUMMARY

A protocol for dipyridamole exercise stress testing with myocardial thallium scintigraphy has been used successfully for the evaluation of exercise or walking-impaired patients. □

ACKNOWLEDGEMENTS

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MRI UPDATE



Figure 1



Figure 2



Figure 3

CLINICAL INFORMATION:

This is a 69-year-old male who is unable to abduct his right arm and who has difficulty extending his arm. This is associated with right shoulder pain.

FINDINGS: Figure 1 is a proton density image in the coronal plane of the right shoulder. There is degenerative hypertrophy of the right acromioclavicular joint with a prominent inferior projecting osteophyte (A). A roughly linear area of low signal intensity inferior to the right distal clavicle represents the medial aspect of the rotator cuff (labeled B). A thin linear structure of low signal intensity superior to the right humeral head (labeled C) represents the lateral portion of the rotator cuff. Figure 2 is a T2-weighted image again demonstrating the inferior projecting osteophyte from the

acromioclavicular joint (A) and the components of the torn rotator cuff (labeled B and C) as previously described. Increased signal intensity material between the torn portions of the rotator cuff represents joint fluid lying both within the joint space and in the subacromial bursa. Image #3 is a partial flip angle image which is sensitive for T2-weighting. This exhibits increased signal intensity in the immediate region of the rotator cuff tear as well as extending lateral over the right humeral head. The level of this slice is slightly anterior to figures 1 and 2 and the increased signal intensity material represents joint fluid extending over the right humeral head into the subdeltoid bursa.

The MR images demonstrate complete disruption of the rotator cuff which may be due to an acute injury or possibly due to

chronic entrapment of the rotator cuff by the degenerated right acromioclavicular joint.

COMMENT: MR imaging is the only modality capable of directly visualizing and differentiating the various soft tissue components of the musculoskeletal system. Only CT arthrography approaches this degree of accuracy in the detection of rotator cuff tears, however CT arthrography like its cousin, routine shoulder arthrography, is invasive and requires injection of contrast into the shoulder joint. MR is the imaging modality of choice in the initial evaluation of soft tissue injuries of the shoulder joint with routine or CT arthrography reserved for those patients on whom the MR study was indeterminate.



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SCMA NEWSLETTER

MARCH 1990

MEDICARE UPDATE

Reminder: Effective October 1, physician offices will be required to submit unassigned and assigned claims for their patients.

Physician office laboratory regulations have not yet been published; however, the AMA has reviewed a draft copy of regulations. The February 16, 1990 AM News reported that the draft regulations require a physician to personally review and initial all test results if such tests as cholesterol screens (qualitative and semi-qualitative determinations) and whole dipstick method of glucose screens are performed in the physician's office. The draft regulations also require that all abnormal screening test results for previously undiagnosed conditions be confirmed in a Level II certified lab.

The SCMA has reviewed an advance copy of the February/March 1990 (MA-05-0290) Medicare Advisory. Please note that the first item on this advisory, Rendering Physician Information, simply means that any assigned claim must have the physician's Medicare number as well as his name in block 30; or if multiple rendering physicians are billing on the same claim form, then the rendering number must go in block 24-C.

The February, 1990 "Medicare On-Line" announced a new method to bill for services rendered in a Health Manpower Shortage Area. This change was required by the new BC/BS computer system which was mandated by HCFA. If you have trouble billing your HMSA code in the new way, Medicare will accept temporarily the former billing method for these claims; however, there may be some delay in payment. All efforts should be put forth to conform to this request.

Medicare is no longer able to process "account numbers" from you because the new HCFA-required system does not provide for this.

Medicare questions should be directed to Barbara Whittaker at SCMA Headquarters.

142ND SCMA ANNUAL MEETING

If you have not already done so, be sure to preregister for the SCMA Annual Meeting and Scientific Assembly to be held at the Omni Hotel in Charleston, April 25 - 29, 1990. Next month's issue of The Journal will be devoted solely to the Annual Meeting

and will include a complete schedule of events, a listing of delegates and alternate delegates, and those reports and resolutions which are available at publication deadline. In addition, special guests will be featured.

For registration forms and hotel reservation forms, contact Debbie Shealy at SCMA Headquarters.

FROM THE OFFICE OF LEGAL AFFAIRS

Infectious Waste: Standards for Disposal of "Sharps"

It has come to our attention that several private companies have recently contacted physicians offering products designed to "properly" dispose of sharps. The following information is provided to make SC physicians aware of the current legal requirements for the disposal of sharps.

On June 8, 1989, a new law went into effect establishing the proper methods for disposal of infectious waste.

Physicians generating less than 50 pounds of infectious waste per month are exempt from most of the provisions of the new law. However, physicians must dispose of sharps by placing them in rigid puncture-resistant containers before disposing of them as solid waste. Nothing more is required for the proper disposal of sharps.

In the near future, DHEC will issue regulations concerning the disposal of cultures, human blood and blood products. Additionally, the regulations will provide a procedure for registration of physicians as infectious waste generators.

Direct questions on this subject to Steve Williams at SCMA Headquarters.

AMA LEGISLATIVE AND REGULATORY ACTIVITIES

The AMA has identified legislative and regulatory activities centered on physician reimbursement reform and RBRVS implementation as some of 16 areas of professional concern which will require major involvement by the AMA and the federation during the second session of the 101st Congress.

Key elements tied to reimbursement reform will be Medicare Volume Performance Standards (MVPS), "overpriced" procedures, maximum allowable actual charges (MAACs) and mandated assignment. In assessing the current national legislative environment, the AMA concluded that the following legislative and regulatory issues also will need significant attention: quality of care, including practice parameters, volume/utilization and PRO/utilization review; strengthening the US health care system, including covering the uninsured and underinsured, mandated health insurance coverage and expansion of Medicaid long-term-care

coverage; substance abuse (alcohol, tobacco and drugs); professional liability; unrelated business income tax; AIDS; and promulgating physician referral and clinical laboratory requirements and procedures for MD offices.

The AMA believes six other professional interest areas will also require attention in the 1990 legislative activities. These are Medicare reform; the budget deficit and reconciliation, including stimulating ample federation financial support for biomedical research, the National Institutes of Health and graduate medical education; animal welfare; campaign financing; anti-trust; and adolescent health.

WASHINGTON, DC UPDATE

Legislation has been proposed which would eliminate HCFA's recent requirement that physicians must bill in their own name for any services performed under coverage arrangements with another physician.

The SCMA has written Senators Hollings and Thurmond and Representatives Ravenel, Spence, Spratt and Tallon to request their support of S.2051 and HR.3980, respectively. Congressman Derrick and Congresswoman Patterson have already signed as cosponsors of HR.3980.

The Senate and House bills, which are identical, state that "... a physician shall be deemed to have provided physicians' services in cases in which

1. the physician is in the solo practice of medicine and the services are furnished to an individual under the care of the physician by a second physician under an arrangement whereby the second physician furnishes such services to such individuals on an occasional basis when the principal physician is unavailable; or

2. the physician is in a group practice of medicine and the services are furnished to an individual under the care of the physician by a second physician in the same group practice under an arrangement whereby the second physician furnishes such services to such individuals on an occasional basis when the principal physician is unavailable."

You are encouraged to write your Representative and our Senators of your interest in this matter. If you have any questions, contact Bill Mahon or Barbara Whittaker at SCMA Headquarters.

NEW STUDENT EMPLOYMENT SERVICE OPENS AT MUSC

MUSC has announced the opening of the Office of Student Employment Services to assist students in locating part-time and full-time jobs and summer employment while in college. Summer requests are now being accepted. If you have a job for a

student, please call Neil Diez, Coordinator of Student Employment Services at MUSC in Charleston, 792-3669, for further information.

UPCOMING MEETINGS AND CONFERENCES

The South Carolina Perinatal Association will hold its 13th Annual Meeting at The Mills House Hotel in Charleston, April 5-6, 1990. Topics to be addressed include "Cocaine Abuse in Pregnancy," "The State of the State of Perinatal Care in South Carolina," "Neonatal Pain" and "Perinatal and Postperinatal AIDS." For additional information, contact Dilip M. Purohit, MD, 792-2112 at MUSC in Charleston.

In observance of its bicentennial, the Medical Society of South Carolina is sponsoring a special lecture at 4:30 PM, Friday, March 30, 1990 at the MUSC Basic Sciences Building Auditorium. Dr. Paul Starr, Professor of Sociology, Princeton University and author of the 1984 Pulitzer Prize-winning book, The Social Transformation of American Medicine, will speak on "The Future of American Medicine." All physicians are invited.

While SC physicians are attending the SCMA Annual Meeting in Charleston, their staffs can benefit from attending the NC Medical Society "Medical Office Workshop Series," April 24-27, 1990 at the Hilton at University Place in Charlotte, NC. Topics covered include how to get the reimbursement you deserve from insurance companies, Medicare and other third-party payers; how to see that patients who can pay do pay - promptly and happily; and how to make your practice run smoothly and without demanding too much of your time. To register by phone (credit card reservations only), call 1-800-722-1350.

Medical staffs from across the county are encouraged to elect a medical staff representative to participate in the AMA-HMSS Assembly meeting June 21-25, 1990 at the Chicago Marriott Hotel. The HMSS Assembly provides medical staffs with a unique opportunity to discuss and participate in the policymaking process of the AMA. In addition to the Assembly Meeting, Stephen Shortell, PhD, of Northwestern University will present an informative program entitled, "Building Effective Hospital Physician Relationships: Ten Success Stories." For further information, call (312) 645-4754 or 645-4761.

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RESULTS OF MAMMOGRAPHIC LOCALIZATION OF OCCULT BREAST CANCER AT A TEACHING COMMUNITY HOSPITAL*

FREDERICK L. GREENE, M.D.**

PAUL MARTIN, B.S.

THEODORE ROTZ, M.D.

In 1989 breast cancer remained the most common cause of female cancer and was second only to lung cancer as a cause of cancer deaths in women.¹ Mortality from this disease has remained constant over the last several decades indicating that advances in treatment modalities are unlikely to lead to substantial reduction in mortality in the near future. Since only one-fourth of all breast cancers can be attributed to any specific risk factor,² selection of patients for mammographic screening, based on risk factors alone, is not likely to identify the majority of women with early, non-palpable, and potentially curable mammary carcinoma. Mass screening, therefore, utilizing self-examination, physician examination, and radiologic techniques has been advocated by the American Cancer Society,³ the Council of Scientific Affairs of the AMA⁴ and other organizations involved in cancer control. The criticisms of such an approach have been directed at cost, technological support, physician involvement, and most importantly, the potential problems created by the "falsely positive" mammogram.

Since the early 1970s studies have reaffirmed that the identification and treatment of non-palpable carcinomas of the breast have been associated with a lower rate of axillary nodal involvement and a higher rate of survival when compared to women having palpable lesions.⁵ Initial attempts at biopsy of mammographically detected suspicious le-

sions depended on "blind biopsy" or instillation of water-soluble contrast agents or vital dyes to facilitate operative localization (Figure 1). These early attempts led eventually to placement of heavy-gauge needles or wires facilitated by mammography. In 1976⁶ the introduction of the hooked-wire technique significantly improved localization attempts and increased the inclination of both radiologist and surgeon to pursue identification and biopsy of non-palpable breast lesions.

Reports from both community and academic centers have shown "true-positive" biopsy rates which have ranged from five to 42 percent.⁷⁻⁹ Because of the critical importance of the "true-positive" rate as an indicator of overall quality and decision-making in relation to early screening, we have retrospectively reviewed our data from an academic-community hospital setting.

METHODS

During the ten-month period, January through October 1988, the Diagnostic Radiology Department at Richland Memorial Hospital in Columbia performed 2,686 mammograms, including 909 studies considered for

METHODS OF BREAST LOCALIZATION

- SKIN MARKING
- BLIND BIOPSY
- WATER SOLUBLE CONTRAST
- VITAL DYES
- HEAVY-GAUGE WIRE

FIGURE 1

* From the Department of Radiology, Richland Memorial Hospital, and the Department of Surgery, University of South Carolina School of Medicine, Columbia. Presented at the Annual Meeting of the South Carolina Surgical Society, June 1989, Sea Island, Georgia.

** Address correspondence to Dr. Greene at the Department of Surgery, Two Richland Medical Park, Suite 402, Columbia, S. C. 29203.

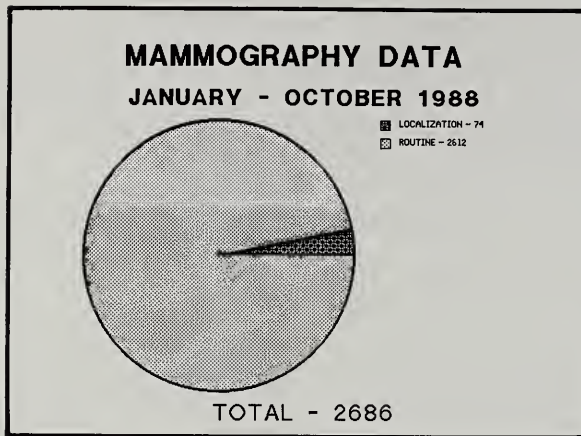


FIGURE 2

screening purposes. Seventy-four patients identified as having non-palpable, but suspicious lesions, underwent biopsy as a result of studies performed (Figure 2). This represented 2.4 percent of all mammograms performed. Standard hook-wire techniques were utilized. In addition, patients had the concomitant instillation of methylene blue as an additional localization method. Mammography was performed in all cases using standard film-screen techniques. All biopsies were performed in the operating room using general anesthesia as well as local infiltration and intravenous sedation techniques. Radiological confirmation of biopsy specimens was performed in 90 percent of those containing calcifications and showed appropriate calcifications matching the localization mammographic findings in all studies. A variety of surgeons were involved in performance of these biopsies and included both clinical and full-time faculty in the Department of Surgery at the University of South Carolina School of Medicine along with surgical residents at various stages of their training. All biopsy specimens were submitted for routine histologic evaluation and frozen section analysis as determined by the operating surgeon.

RESULTS

Of the 74 breast biopsies performed, 16 were proven malignant utilizing standard criteria for both intra-ductal and invasive adenocarcinoma of the breast (Figure 3). The "true-positive" biopsy rate during this ten-month time period equated to 21.6 percent. Eight biopsies showed *in-situ* ductal or lobular carcinoma while the remaining eight biopsies

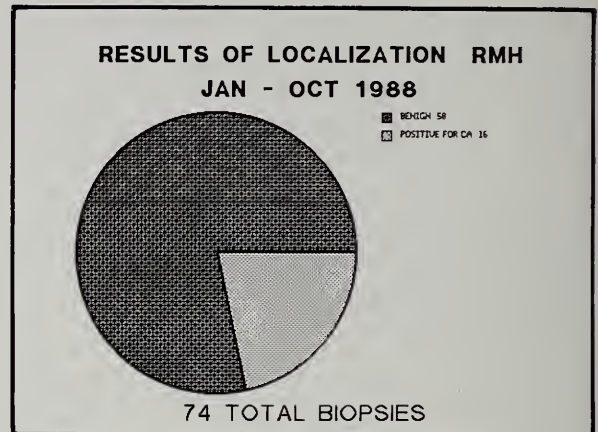


FIGURE 3

were proven to be invasive lesions. Fifty-eight, or 78.4 percent, of biopsy specimens obtained by localization were benign. Of the lesions showing microcalcifications as an indication for localization, 40 percent were proven to be associated with cancer.

DISCUSSION

The purpose of our study was to derive data regarding our ability to predict which mammographically localized lesion should be biopsied and to compare our results with those of others. Our true-positive rate of 21.6 percent compares quite favorably with data reported from both academic and community centers.¹⁰ Furthermore, our results confirm that although microcalcifications continue to be an important indicator leading to localization and biopsy, most women having mammographic calcified areas are eventually shown to have benign disease on biopsy.¹¹

A recent analysis of nearly 4,000 women reveals an overall incidence of true-positive biopsies of 21.9 percent.¹⁰ Forty percent of these tumors were non-invasive or minimal breast cancers. Surprisingly, 15 percent of women in this large series had positive axillary nodes. Most series confirmed that localization and treatment of minimal breast cancers is associated with a much lower rate of axillary involvement. Our own series revealed no axillary involvement in the eight women found to have *in-situ* breast cancer.

The value of reviewing one's data is ultimately to improve the predictive quality of the mammogram as utilized by both radiologist and surgeon. While our own predictive rate compares favorably with other reports, 78 per-

cent of women underwent biopsies who were ultimately proven to have benign histologic findings. Screening mammography with resultant localization has been criticized for not being specific enough as a predictor of neoplastic breast disease. This may result in both increased morbidity and cost when large groups of women are biopsied for benign disease. We must continue to refine our guidelines for the recommendation of biopsy after mammographic studies. A great responsibility for correct interpretation lies with the mammographer. The surgeon, however, who makes the ultimate decision for biopsy, must also work closely with his radiologic colleague. Only by this team approach can we reduce unnecessary mammographic localization and biopsy and make this important technique the invaluable indicator that it can become. □

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A NEW CODE OF ETHICS: THE PRINCIPLES OF ETHICS OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

ROBERT M. SADE, M.D.*

INTRODUCTION AND BACKGROUND

Interest in biomedical ethics and the literature it has generated have grown explosively over the past few decades. Critical thought has led to the development of a variety of theories regarding medical ethics, based on patient autonomy,^{1, 2} beneficence toward patients,³ virtue for its own sake,⁴ medical norms,⁵ social policy planning,⁶ and the health care market,⁷ among others. These theories are not mutually exclusive, sharing many common ideas, but all arise from different perspectives, so conflicts abound. Many theorists have proposed codes of medical ethics, the majority designed to serve as guides for physician behavior.

Codes of ethics, however, serve two purposes: not only do they guide behavior of the members of the profession, they also serve as an identity for the profession. A familiar and clear example is the Lone Ranger. He had a reputation for the relentless pursuit of justice, and his mask was the symbol for who he was. Everyone knew that the masked man stood for law and order. His search for outlaws was unflagging, he was always honest, he was always fair, he would shoot his pearl-handled revolvers only in self defense, and his silver bullets were never aimed to kill. These characteristics constituted his ethic. In any law and order situation, he always did the right thing. Consequently, if any ranger in those thrilling days of yesteryear wanted to know what was the right thing to do in a given situation, he need only ask himself, "What would the Lone Ranger do now?"

This simple example illustrates what an ethic does: it embodies the virtues required to achieve professional goals. Not only does the ethical person know what is the right thing to

do, but others know in advance how that person will respond to a given situation.

Physicians have a symbol that identifies us as members of a profession: the M.D. degree. The degree tells others not only what our educational background is, but also how we will behave in professional situations. The M.D. degree symbolizes an ethic and reflects proper professional behavior.

Many ethical codes have been enunciated over the years, but none comprises a complete fundamental ethic. The Oath of Hippocrates is about 2500 years old, and is still taken upon the receipt of the M.D. degree. It requires that the physician act for the benefit of the patient, and treat information about the patient as confidential. Beyond those few strands of continuity with the present, the oath has little of modern relevance. The declaration of Geneva, first adopted in 1948, places the health of the patient as the first consideration of the physician, but does not mention rationality or competence of the physician, nor does it describe autonomy of the patient. The current code of ethics of the American Medical Association requires competence and continuing study by the physician, but does not place the patient's welfare as his highest priority.

RATIONALE FOR NEW CODE

The Ethics Committee of the S.C.M.A. was created in the spring of 1987. Among its first tasks was a fundamental reconsideration of professional ethics. It was eventually decided that a code for our Association should be virtue-based, be a *medical* code, free of legal language and influence, and serve both as an identity for our profession and as a behavioral guide for physicians.

The foundation for an enduring code of ethics appropriate for the practice of the art and science of medicine comprises a few basic elements. The first is the fact that people may be

* Department of Surgery, Medical University of South Carolina, 171 Ashley Avenue, Charleston, South Carolina 29425.

injured or become ill. This has always been true and we can assume always will be true. A corollary is that the physician is and has always been primarily a healer. He has also been at times an educator of both patients and students, a researcher more or less formally, an administrator with increasing frequency, a preventer of disease both in public health and in private practice, and a businessman by necessity. But before all these, the physician is a healer of the sick.

Another element comprising the foundation of our ethic is rationality, which forms the solid rock upon which modern medicine stands. The rational approach takes many forms: for example, formal experimental medicine, less formal empirical review of experience that is more or less rigorous, and, in addition, avoidance of all dogma. It is this reliance upon reason that has carried medical practice to the unprecedented heights it enjoys today.

Rationality is the basis of our science, but a complementary element must be acknowledged: the noncognitive interactions with patients that comprise the art of medicine. The importance of these interactions is attested by the successes of the witch doctors and shamans of yesterday and the dogmatists of today, like faith healers and chiropractors. To heal successfully, the healer must be perceived by the patient as trustworthy, because the patient's belief that a treatment will work is an important determinant of whether it will in fact work.

To be worthy of trust, the physician must be honest, have the utmost regard for confidentiality of all information communicated in the course of treatment, and have respect for the patient's autonomy over his own body. The most important guarantee of the trust that is so important in treating illness is the patient's knowledge that his own best interest is the first and foremost concern of the physician.

Consistently acting in the patient's best interest requires integrity: congruence of actions with moral values and medical knowledge. Without integrity, the entire relationship between physician and patient becomes hollow, the physician's actions unpredictable, and trust foundationless.

To maintain integrity, the physician must

exercise independent judgment in medical matters, for the bond that exists between him and his patient makes the physician uniquely able to weigh sensitively and accurately the medical facts and the patient's needs to arrive at correct conclusions. The healing process cannot be managed by committee, but others may have special knowledge or skill that may benefit the patient; they should be consulted when appropriate.

The place for the patient's autonomy in decision-making has been controversial: is his autonomy absolute,² is the patient's best interest overriding,³ or, as some believe, is the social or economic good of primary importance?^{6, 7} Since the goal of the relationship is healing of the patient, his values must be primary in the healing process, so should be honored and protected by the physician. Yet, the physician's integrity also must not be violated. While medical choices must be made by constant negotiation between physician and patient, an irreconcilable conflict of values may justify, even require, withdrawal of the physician from the relationship after he informs the patient of his reasons and intent to do so.

CONCLUSION

The Ethics Committee constructed a code embodying the ethic described above (see box), and included the AMA Principles in their entirety as a second section. The Principles of Medical Ethics of the American Medical Association have been painstakingly developed with several revisions since 1847. In the current version, adopted in 1980, these Principles are incomplete as a fundamental statement of the physician's ethic, yet contain valuable observations. They have been the subject of much thoughtful refinement and explication over the years, particularly in the Council on Ethical and Judicial Affairs,⁸ so have been included in the SCMA Principles.

Our principles of ethics were adopted by the SCMA at its annual meeting in May, 1988. To our knowledge, the SCMA is the only state medical society to have adopted its own code of ethics rather than simply accepting the AMA Principles as they stand. The Association may be justifiably proud of its pioneering Principles of Medical Ethics. (*References, P. 166*) □

Principles of Medical Ethics of The South Carolina Medical Association

- A. The principal objective of a physician is to care for the sick with fidelity and compassion, striving always to be worthy of their trust. The identity of medicine as a profession rests upon certain fundamental virtues of all physicians.
- I. A physician is loyal first to the patient, then to the profession and larger communities.
 - II. A physician is rational in applying medical knowledge and skill and maintains competence by continually learning from objective evaluation of medical practice. A physician does not accept as a professional peer any person who rejects the primacy of rationality and objective evaluation.
 - III. A physician acts on the basis of the free exercise of his or her own best judgment, taking into account the ideas and opinions of others when such consideration is appropriate.
 - IV. A physician acts with integrity, consistently basing professional actions on medical knowledge and moral values. If the values of physician and patient conflict, the physician either defers to the patient or withdraws from the relationship with adequate notice to the patient.
 - V. A physician is at all times honest with self, with patients, colleagues, and all others, while being compassionate and sensitive to human needs.
 - VI. A physician does not reveal confidences entrusted in the course of medical attendance or any other characteristics of a patient without the patient's permission, unless it becomes necessary to protect the patient or others from harm.
- B. The American Medical Association has adopted a set of Principles of Medical Ethics which reflect and apply these fundamental virtues. We accept those principles, which follow.
- Preamble: The medical profession has long subscribed to a body of ethical statements developed primarily for the benefit of the patient. As a member of this profession, a physician must recognize responsibility not only to patients, but also to society, to other health professionals, and to self. The following Principles adopted by the American Medical Association are not laws, but standards of conduct which define the essentials of honorable behavior for the physician.
- I. A physician shall be dedicated to providing competent medical service with compassion and respect for human dignity.
 - I. A physician shall deal honestly with patients and colleagues, and strive to expose those physicians deficient in character or competence, or who engage in fraud or deception.
 - III. A physician shall respect the law and also recognize a responsibility to seek changes in those requirements which are contrary to the best interests of the patient.
 - IV. A physician shall respect the rights of patients, of colleagues, and of other health professionals, and shall safeguard patient confidences within the constraints of the law.
 - V. A physician shall continue to study, apply and advance scientific knowledge, make relevant information available to patients, colleagues and the public, obtain consultation, and use the talents of other health professionals when indicated.
 - VI. A physician shall, in the provision of appropriate patient care, except in emergencies, be free to choose whom to serve, with whom to associate, and the environment in which to provide medical services.
 - VII. A physician shall recognize a responsibility to participate in activities contributing to an improved community.

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ERRATUM

The paper entitled "What'd He Say? Street Drug Terminology," in the January, 1990 issue of *The Journal of the South Carolina Medical Association* was authored by N. Peter Johnson, Ph.D., Philip J. Michels, Ph.D., and Craig W. Davis, Ph.D. The latter two authors were inadvertently omitted. The Guest Editors regret this error.



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FERROL SAMs, M.D. PRESIDENTIAL BANQUET SPEAKER

JOHN W. SIMMONS, M.D.*

My first memory of Ferrol Sams is as a boy, having spent two days with vomiting and diarrhea. He stood there in my bedroom and told my mother that I was dehydrated. She and I both feared that I was about to go to a hospital, but right there I was introduced to home health and home IV therapy. Sambo instructed mother in needle care, and several hours later she removed an empty IV bottle. Almost as if by magic the vomiting had stopped and I no longer feared for my life.

Other early memories of Sambo include his care of my grandparents, again at home. My grandfather had lung cancer, and while caring for him, my grandmother had a heart attack. Home health service came through again as Sambo visited daily and sometimes twice daily for weeks. My grandfather died, but my grandmother lived several more years before dying with cancer of the colon. Once again Sambo provided almost constant care, with visits to the house, sometimes both before and after his office hours.

He has attended my parents and my boys. Four generations of Simmons's have benefited from his healing practice.

Sambo will be the featured speaker at the president's inaugural banquet on April 28 this year. I will save my new president's remarks

until the Sunday morning House of Delegates meeting.

Invitations to speak have created a situation requiring Sambo to limit engagements to prevent interference with a still active practice. A conflict arose this year when he was asked to speak on the same night to his 45th Emory class reunion. He kept his date with me.

The demands to speak began when he started writing five or six years ago. Many of you have read some or perhaps all of his books. *Run with the Horseman*, and *Whisper of the River* are biographical. *The Widow's Mite* is a collection of short stories. *The Passing*, another book of short stories, is illustrated by South Carolina artist Jim Harrison, of Denmark. Most recently is *Christmas Gift*, a poignant memory of Christmas in our childhood and the meaning these memories give to Christmas today.

I invite you to do two things. First, obtain and read some or all of Sambo's books. And, second, make your plans to come to the SCMA Annual Meeting and specifically to the president's banquet to meet Sambo and hear him speak. Bring your books if you would like him to autograph them. He is my close friend and I want you to know why.

* 101 E. Wood Street, Spartanburg, S. C. 29303.

Editorials

THE PRINCIPLES OF ETHICS OF THE SOUTH CAROLINA MEDICAL ASSOCIATION THE SCMA ETHICS COMMITTEE

The Ethics Committee of the South Carolina Medical Association was created in the spring of 1987. Among the first issues examined by the new Committee was the concept of professional ethics. Many months of deliberation and debate within the Committee resulted in the development of a new code of ethics, which was presented to and adopted by the South Carolina Medical Association at its annual meeting in 1988.

The new code is published elsewhere in this issue of *The Journal*, along with an article written by one of the committee members. We should take pride in these Principles; our Association is the only one in the nation, to our knowledge, to have developed and adopted its own code of ethics.

Committee Members:

John M. Roberts, M.D., (Chairman)
Elizabeth R. Baker, M.D.
Charles R. Duncan, Jr., M.D.
Frederic G. Jones, M.D.
Timothy S. Llewelyn, M.D.
Cecil Quattlebaum, M.D.
Robert M. Sade, M.D.
Donald E. Saunders, M.D.
J. Richard Sosnowski, M.D.

Consultants:

Nora K. Bell, Ph.D.
Albert H. Keller, Ph.D.
Douglas MacDonald, Ph.D.
Stuart Sprague, Ph.D.

ETHICS AND EX PARTE DISCUSSIONS

The adoption of a new code of ethics by the SCMA was one the high points of the last decade. However, even before the code was adopted, we were warned that the patient confidentiality provision may be used by plaintiff's attorneys in malpractice suits to gain an unfair advantage.

By threatening the treating physicians with "breach of confidentiality," the plaintiff's attorneys attempted to prohibit or limit ex parte discussions between the defendant's attorney and the treating physicians. Since the plaintiff's attorney has access to all the treating physicians, by virtue of the plaintiff-patient's blanket permission, any limitation on the defendant's attorney would clearly tilt the playing field in favor of the plaintiff.

The SCMA Board of Trustees felt a code of ethics should not be used by one party to gain advantage over another. After receiving the advice of the Ethics Committee and the Risk

Management Committee, the Board adopted the following clarifying statement at its November 1989 meeting:

"A physician against whom a suit has been filed is entitled to defend himself, and may ethically discuss the patient's treatment with an insurance representative, the defense attorney, and other physicians.

Any treating physician and the defendant physician may discuss ex parte, to the extent allowed by law, matters within the scope of the lawsuit.

Physicians should act with integrity, honesty, and on the basis of the free exercise of their own best judgment in deciding the manner and content of communications with others relating to the patient's medical care."

This statement supports the traditional confidentiality of doctor-patient relationships,

without placing unfair constraints on the physicians.

William F. Fairey, M.D., LLB., Chairman of the SCMA Professional Liability Committee, has written an excellent article on physician-patient confidentiality and ex parte discussions in the Physician Risk Management Bulletin (fall 1989), and I encourage all South Carolina physicians to read it.

J. CHRIS HAWK, III, M.D., *Chairman*
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CHILD ABUSE: NEW PERSPECTIVES

In this issue of *The Journal*, a paper by Dr. Tim Mader provides an overview of child abuse in our state. He stresses the importance of recognition and reporting by all South Carolina physicians.

The scope of child abuse and its therapy in our country has continued to broaden since child maltreatment was first recognized in the 19th century. Its early stages were characterized by attempts to prevent overt physical abuse and neglect. With time, other forms and manifestations of abuse became apparent, including emotional abuse and neglect, educational neglect and institutional abuse. The 1980s proved to be the decade of awareness of sexual abuse, yet another serious indictment of society's treatment of children. Sexual abuse, previously the least reported form of child abuse, now accounts for an ever increasing percentage of total reports in every state. In some locales it is the most reported form of abuse. The physician of the '90s must overcome ignorance, inexperience with genital exams, and lack of formal training in order to meet this new clinical challenge.

The 1990s will present another confounding factor in dealing with abused/neglected children. Substance abusing mothers are now delivering infants addicted to and/or handicapped by illicit drugs. Nationwide, prevalence of positive maternal urine toxicologies at the

first prenatal visit has been shown to be 14.8%. The major drugs of abuse found on these screens were cocaine and marijuana. However, crack cocaine and methamphetamines are rapidly becoming the drugs of choice in addicted mothers. Effects on the fetus and infant are variable, but impressive. Frank withdrawal, cognitive defects, abnormal development and behavior, as well as death have all been documented. Our state currently is investigating ways to compare prevalence here with that of the nation.

Neonatal addiction, as the latest form of harm to children, poses a multitude of questions: What are the legal ramifications of documented maternal illicit drug abuse? To what extent is the mother liable for damage to her baby? What is society's responsibility to both mothers and infants? Should DSS or law enforcement be the primary agency of intervention? What and to whom should physicians/hospitals report? Hopefully the '90s will provide as many answers as questions, but one answer already is clear: physicians must recognize the signs and symptoms, conform to legal mandates, and maintain or enhance their knowledge and understanding of the problem.

What about the "system?" Currently the Department of Social Services is charged with the legal responsibility of establishing whether sufficient evidence is present to substantiate the

reported abuse or neglect. The system has its own considerable problems. DSS workload is excessive; many workers are inadequately trained or poorly motivated; worker turn-over rate is high; and there are claims of mismanagement and apathy at supervisory levels. Additionally, the line of responsibility between law enforcement and DSS is blurred at best, particularly when custody of a child at risk is at issue.

The courts and the judicial system often compound and confound the problem. Attorneys and judges have little formal training in aspects of child abuse and the abusive family, or their effects on society as a whole. Judicial proceedings are fractious and time consuming, and many times the courts have expectations of DSS which are not granted in that agency's legislative mandate.

And what about physicians? Where do we fit within the system? The South Carolina Code dictates that we report suspicion of abuse or neglect of children; that much is clear. However, do we not have other responsibilities to the child, to the family, to DSS and to the courts? A 1988 survey of selected South Carolina pediatricians and family practitioners cited three major problems with the system:

1. A poor relationship with DSS including that agency's unrealistic expectations of physician time and expertise.
 2. Interruption of office time and patient care by the threat of testifying in an unsympathetic, disorganized court system.
 3. Inadequate training in child abuse issues.
- What can we do? At the very least we can

become better educated, either through formal, organized programs or through self education. We do it for diabetes and hypertension, we should do it for child abuse. Ultimately, I hope we might establish regional centers throughout the state to deliver services to the child and family and to work with DSS and the courts. Such centers could be located in several pediatric and family medicine residency training programs and be administered by faculty "experts." Until then, the individual physician has as much responsibility to the abused patient as he does to the diabetic: recognition of the problem, treatment of the underlying condition, relief of pain and discomfort, and continued involvement to assure the best possible outcome.

We can also try to help educate DSS and the courts; not by expletives, but by examples. To change the system will require understanding and dedication by all involved professionals as well as a unity of purpose to assure a productive future for our children.

The system is inchoate; the physician inconvenienced, the child incapacitated. Outward scars represent inward wounds, many of which will never heal without our help. Inconvenience simply does not excuse our lack of commitment.

RONALD C. PORTER, M.D.
Department of Pediatrics
University of South Carolina
School of Medicine
2 Richland Medical Park
Columbia, S. C. 29203

Guest editorials reflect the opinions of the authors and do not necessarily represent the opinions of the Editorial Board or the South Carolina Medical Association.

—CSB

On the Cover:

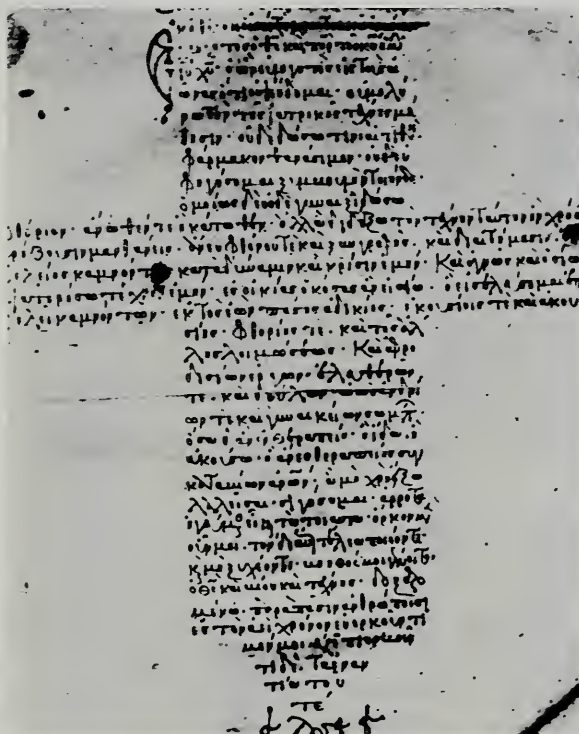
MEDICAL ETHICS: THOMAS PERCIVAL

Perhaps the earliest code of medical ethics still extant is the oath of Hippocrates which has undergone many translations and revisions through the years. Pictured here is the manuscript form of the "Oath According to Hippocrates Insofar as a Christian May Swear It" from the 10th or 11th century and housed in the Vatican. The translation by W. H. S. Jones is:

Blessed be God the Father of our Lord Jesus Christ, who is blessed for ever and ever; I lie not.

I will bring no stain upon the learning of the medical art. Neither will I give poison to anybody though asked to do so, nor will I suggest such a plan. Similarly I will not give treatment to women to cause abortion, treatment neither from above nor from below. But I will teach this art, to those who require to learn it, without grudging and without an indenture. I will use treatment to help the sick according to my ability and judgment. And in purity and in holiness I will guard my art. Into whatsoever houses I enter, I will do so to help the sick, keeping myself free from all wrong-doing, intentional or unintentional, tending to death or to injury, and from fornication with bond or free, man or woman. Whatsoever in the course of practice I see or hear (or outside my practice in social intercourse) that ought not to be published abroad, I will not divulge, but consider such things to be holy secrets. Now if I keep this oath and break it not, may God be my helper in my life and art, and may I be honoured among all men for all time. If I keep faith, well; but if I forswear myself may the opposite befall me.

Thomas Percival (1740-1804), featured on this month's cover, was the first to use the term "medical ethics" in his book, *Medical Ethics*:



or, a Code of Institutes and Precepts, Adapted to the Professional Conduct of Physicians and Surgeons. This important work was published in 1803, after having been circulated for several years among his friends to get their reactions and criticisms. The publication at first was delayed by the death of Percival's son, for whose use it was intended; but when a second son decided to enter the profession of medicine, Percival decided to offer his book to the public, and to this son to whom it was affectionately dedicated.

Percival's *Ethics* has had a profound influence on all subsequent codes, including the "Code of Ethics" of the AMA, formulated and adopted in 1847, and accepted by the South Carolina Medical Association at its founding in 1848.

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Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

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Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

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Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

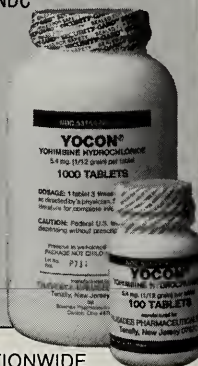
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

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References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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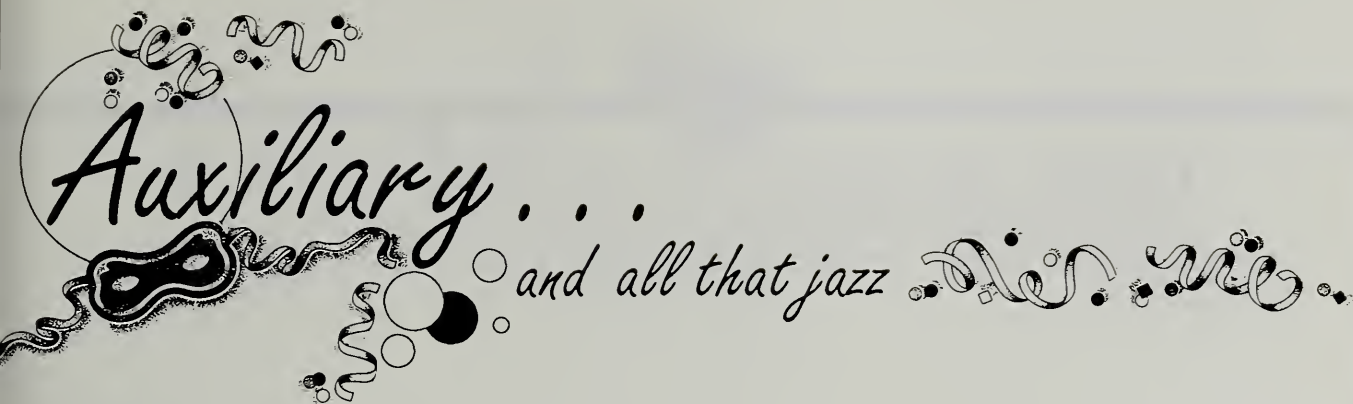
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CONVENTION 1990

A New Orleans atmosphere will welcome you as you attend the 1990 Convention of the South Carolina Medical Association Auxiliary. These festivities will take place at the Omni Hotel at Charleston Place, April 25-29, 1990.

This year, registration will be located on the second floor near SCMA registration. Please stop by, pick up your packets and find out about SCMA and Auxiliary functions that are taking place during Convention.

Our Executive Board will meet on Thursday morning. A breakfast buffet with muffins, juices, coffee and teas will be located in the meeting room. Thursday noon will begin our sessions of make overs by the very best of Estee Lauder's artists. There will be NO charge for this special event. Sign up will be at the registration desk and is imperative. The make overs take approximately 30 minutes each. There will be six Estee Lauder representatives taking care of you during Thursday and Friday afternoons. A walking architectural tour will begin at 3:00 p.m. Thursday. Be sure to wear comfortable shoes. We will need a minimum of 15 participants for this excursion.

The House of Delegates will meet Friday morning. Mrs. Charles Moloney (Bernardine), AMA Auxiliary Treasurer, will represent the AMA Auxiliary. A New Orleans theme breakfast will be an added attraction to our House of Delegates meeting. A champagne reception honoring our 1990-1991 officers and the Presidents' luncheon honoring past state presidents and county presidents will be part of Friday's festivities. Estee Lauder make overs will be offered again this afternoon as well as a carriage tour of historic Charleston. The carriages will thoughtfully pick us up at the hotel. Again, a minimum of 15 persons will be necessary to schedule this function.

Hotel reservations should be made directly with the Omni (1-722-4900), 130 Market Street, Charleston, South Carolina 29401. Be sure to request special SCMA rates. Contact the SCMA to purchase tickets for the SOCPAC Luncheon and the SCMA Banquet. Ferrol Sams will be the featured speaker during the banquet this year—an event you don't want to miss!

With so many wonderful things taking place, pre-registration is again this year a must. Registration must be received by April 9, 1990. There will be NO ticket sales during Convention unless there is a cancellation.

LINDA SMITH
Convention Chairman

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ONE HUNDRED FORTY-SECOND ANNUAL MEETING

THE OMNI HOTEL AT CHARLESTON PLACE
CHARLESTON, SOUTH CAROLINA
APRIL 25-29, 1990

The 142nd Annual Meeting of the South Carolina Medical Association celebrates ten consecutive years in Charleston and the fourth year at the Omni Hotel.

Information regarding the meeting, including registration form and hotel reservation forms, has been mailed to all South Carolina physicians, but if you have not received this information, call SCMA Headquarters in Columbia (798-6207 or 1-800-327-1021). Again, there is no registration fee for SCMA members, and pre-registration is encouraged.

The House of Delegates meets to consider the business of the association on Thursday morning, April 26 and again on Sunday morning, April 29. Speaker of the House, O. Marion Burton, M.D., will preside, assisted by Vice Speaker Benjamin E. Nicholson, M.D. Reference Committees will meet on Thursday afternoon.

A total of 18 AMA Category I credit hours will be available through scientific sessions beginning on Wednesday afternoon and continuing through Saturday afternoon. Consult the schedule of events which follows for details on all programs.

Special guests for this annual meeting include Alan R. Nelson, M.D., President of the American Medical Association, and the SOCPAC Luncheon Speaker, Congressman J. Roy Rowland, Jr., M.D., a native of Wrightsville, Georgia and one of only two medical doctors in Congress today.

Ferrol Sams, M.D., noted physician-author from Fayetteville, Georgia, is the featured speaker at the President's Inaugural Banquet on Saturday evening.

The SCMA Auxiliary will hold its Annual Meeting concurrently with the SCMA, and in addition to the meeting of the Auxiliary House of Delegates, many special activities have been planned. A record number of specialty societies will be holding business and scientific sessions and, again this year, Mead Johnson Nutritional Division has organized and will provide prizes for a golf tournament on Friday afternoon.

The SCMA Board of Trustees will meet on Wednesday, April 25 and at breakfast each day to consider business which arises during the House of Delegates meeting.

This issue of *The Journal* contains those reports and resolutions available at publication deadline. Additional reports and resolutions received after this issue has gone to press will be included in the Delegates Handbooks which will be mailed prior to the meeting. Delegates are asked to bring their handbooks to the meeting or to pass them along to Alternate Delegates if they are unable to attend.

—JD

ONE HUNDRED FORTY-SECOND ANNUAL MEETING SCHEDULE OF EVENTS

Wednesday, April 25, 1990

TIME/LOCATION	EVENT
7:30 a.m.-8:30 a.m. Louis's Charleston Grill	SCMA Board of Trustees Breakfast
8:30 a.m.-12:15 p.m. Jenkins/King Room	SCMA Board of Trustees Meeting
11:30 a.m.-7:00 p.m. 2nd Floor Grand Hall	SCMA Registration—Open
12:15 p.m.-1:30 p.m. Louis's Grill	SCMA Board of Trustees Luncheon
1:00 p.m.-4:00 p.m. Suite 2H	SCMAA/SCIMER Scholarship Interviews
1:00 p.m.-5:00 p.m. Dogwood/Cypress/Live Oak Ballroom and Grand Hall	Exhibitors Setup
1:00 p.m.-5:00 p.m. 2nd Floor Lobby	Auxiliary Registration—Open
1:30 p.m.-5:00 p.m. Jenkins/King Room	SCMA Board of Trustees Meeting
3:00 p.m.-5:00 p.m. Drayton Room	SCMA Workshop: "AIDS/OSHA Regulations" "AIDS, OSHA and the Office Practice" Robert J. Sharbaugh, Ph.D., Charleston
	"HIV and the Healthcare Worker" Charles S. Bryan, M.D., USC School of Medicine
3:00 p.m.-5:00 p.m. Willow I	SCMA Workshop: "RBRVS Update" Robert B. Doherty, American Society of Internal Medicine, Washington, D. C.

Thursday, April 26, 1990

TIME/LOCATION	EVENT
7:00 a.m.-5:00 p.m. 2nd Floor Grand Hall	SCMA Registration—Open
7:00 a.m.-8:00 a.m. Louis's Charleston Grill	SCMA Board of Trustees Breakfast
7:00 a.m.-8:00 a.m. Fenwick Room	SCMA Past Presidents' Breakfast
7:00 a.m.-8:00 a.m. Edmunds Room	Specialty Society Delegates Meeting

SCHEDULE OF EVENTS

Thursday, April 26, 1990 (continued)

TIME/LOCATION	EVENT
7:30 a.m.-8:30 a.m. Booths 22 & 42	Coffee
7:30 a.m.-5:00 p.m. Dogwood/Cypress/Live Oak Ballroom and Grand Hall	Exhibits Open
8:00 a.m.-5:00 p.m. 2nd Floor Lobby	Auxiliary Registration—Open
8:00 a.m.-11:30 a.m. Willow/Magnolia Ballroom	SCMA House of Delegates
9:30 a.m.-12:00 noon Jenkins/King Room	Auxiliary Executive Board Meeting
9:45 a.m.-10:45 a.m. Booths 22 & 42	Coffee Break (Compliments of The Medical Protective Company)
10:00 a.m.-11:00 a.m. Riley Room	MUSC Medical Alumni Board Meeting
12:00 noon-1:30 p.m. Suite 2K	SCMA Medical Ethics Committee Meeting and Luncheon
12:00 noon-2:00 p.m. Drayton Room	SCMA Young Physicians' Section Luncheon & Meeting (Compliments of the Young Physicians Section of the AMA)
12:30 p.m.-1:30 p.m. Edmunds Room	Reference Committee Chairmen's Luncheon
12:30 p.m.-2:00 p.m. Wickliffe House	Auxiliary Past Presidents' Luncheon
12:45 p.m.-2:30 p.m. Magnolia Ballroom	MUSC Alumni Luncheon
1:30 p.m.-3:00 p.m. Colleton, Fenwick, Gadsden and Beauregard Rooms	SCMA Reference Committee Meetings (Specific room assignments will appear in Delegates Handbook)
1:30 p.m.-3:30 p.m. Willow Ballroom	SCMA Plenary Session: "Wellness" "Where Are We Going?" (Wellness) Roger Sargent, Ph.D., USC School of Medicine "How Do We Get There?" (Fitness) Frederick E. Reed, Jr., M.D., Charleston "How Do We Stay There?" (Motivation) Gilbert B. Bradham, M.D., Charleston
2:00 p.m.-3:00 p.m. Booths 22 & 42	Coffee Break
2:30 p.m.-5:00 p.m. Edmunds Room	"Tax Planning Seminar" Mark Hobbs, CPA, Hobbs and Rendleman

SCHEDULE OF EVENTS

Thursday, April 26, 1990 (continued)

TIME/LOCATION	EVENT
3:30 p.m.-5:00 p.m. Hampton Room	SCMA Workshop: "Respiratory Management in the Elderly" "Pneumonia in the Elderly" Gerald N. Olsen, M.D., USC School of Medicine "The Respiratory Response to Trauma and Surgery in the Elderly" Angelo Sinopoli, M.D., Greenville "Changes in Pulmonary Function with Aging" Charles Strange, M.D., MUSC
3:30 p.m.-5:00 p.m. Drayton Room	SCMA Workshop: "Ethics" "The Ethics of Tissue and Organ Donation: Who Should Give; Who Should Receive?" Julia E. Connelley, M.D., University of Virginia School of Medicine
3:00 p.m.-5:00 p.m. Beauregard, Fenwick, and Gadsden Rooms	SCMA Reference Committees (Specific room assignments will appear in Delegates Handbook)
5:00 p.m.-6:30 p.m. Colleton Room	Medical College of Georgia Alumni Reception
5:00 p.m.-7:00 p.m. Jenkins/King Room	USC School of Medicine Alumni and Faculty Reception
6:00 p.m.-7:30 p.m. Front Circle of Hotel	SCMA Reception Honoring Delegates, Alternates, Speakers and Exhibitors

Friday, April 27, 1990

TIME/LOCATION	EVENT
7:00 a.m.-5:00 p.m. 2nd Floor Grand Hall	SCMA Registration—Open
7:30 a.m.-8:30 a.m. Louis's Charleston Grill	SCMA Board of Trustees Breakfast
7:30 a.m.-9:00 a.m. Fenwick Room	Editorial Board Breakfast
7:30 a.m.-9:30 a.m. Beauregard Room	MUSC Class Representatives Breakfast
7:45 a.m.-8:45 a.m. Booths 22 & 42	Coffee
8:00 a.m.-9:30 a.m. Colleton Room	Residents Breakfast Meeting (Compliments of the Resident Physicians Section of the AMA)

SCHEDULE OF EVENTS

Friday, April 27, 1990 (continued)

TIME/LOCATION	EVENT
8:00 a.m.-12:00 noon 2nd Floor Lobby	Auxiliary Registration—Open
8:00 a.m.-5:00 p.m. Dogwood/Cypress/Live Oak Ballroom and Grand Hall	Exhibits Open
8:30 a.m.-10:00 a.m. Jenkins/King Room	Risk Management Workshop (Continental Breakfast) “Medical Liability Risk Management 1990” Robert S. Brittain, M.D., Medical Liability Consultants Program, Inc., Englewood, Colorado
8:30 a.m.-11:00 a.m. Edmunds Room	Sports Medicine Committee Breakfast Meeting
8:30 a.m.-12:00 noon Willow Ballroom	SCMA Plenary Session: “Disaster Planning: The Hugo Experience” Moderator: Kenneth G. Varley, M.D. Panelists: C. Michael Sheppa, M.D., Charleston, Mr. Frank J. DeMarco, III, Trident Regional Medical Center, Mr. Paul Lunsford, Director, S. C. Emergency Preparedness Division
9:00 a.m.-12:00 noon Magnolia Ballroom	Auxiliary House of Delegates
10:00 a.m.-11:30 a.m. Riley Room	Professional Liability Committee Meeting
10:30 a.m.-11:30 a.m. Fenwick Room	SCIMER Board Meeting
10:30 a.m.-11:30 a.m. Booths 22 & 42	Coffee Break
11:30 a.m.-12:30 p.m. 2nd Floor Lobby	S. C. Cardiac Rehabilitation Registration
12:00 noon Patriot’s Point Golf Links	Golf Tournament—Organized by and Prizes Awarded by Mead Johnson Nutritional Division
12:00 noon-12:30 p.m. Palmetto Courtyard	Auxiliary Reception Honoring New Officers
12:00 noon-1:00 p.m. Gadsden Room	Annual Meeting and Luncheon of the South Carolina Medical Care Foundation and Board of Directors
12:30 p.m.-2:00 p.m. Louis’s Charleston Grill	Auxiliary Presidents’ Luncheon

SCHEDULE OF EVENTS

Friday, April 27, 1990 (continued)

TIME/LOCATION	EVENT
12:30 p.m.-4:30 p.m. Willow Ballroom	<p>S. C. Cardiac Rehabilitation Symposium “Media Health Messages: Do They Alert or Alarm?” Carolyn O’Neil, M.S., R.D., Atlanta, Ga.</p> <ul style="list-style-type: none"> • “Heart Rx (American Heart Association)” Debbie Hubert, R.N., Richland Memorial Hospital • “S. C. Cardiac Rehabilitation Association—Update” Billy Webster, Ph.D., Greenville Memorial Hospital <p>“Transplantation and Exercise” Patricia Painter, Ph.D., USC Transplant Service, San Francisco, CA</p>
1:00 p.m.-3:00 p.m. Beauregard Room	<p>S. C. Psychiatric Association “Update on the Place of Benzodiazepines in Psychiatric Medicine” James C. Ballenger, M.D., MUSC</p> <p>“Recognizing the Addict in Your Practice” Robert J. Malcomb, M.D., MUSC</p>
1:00 p.m.-5:00 p.m. Drayton Room	<p>S. C. Diabetes Association: “Managing Diabetes in the 1990s” (Supported by the Upjohn Company) Leonard S. Lichtenstein, M.D., MUSC; Marti Chitwood, R.D., Charleston</p>
1:00 p.m.-5:30 p.m. Jenkins/King Room	<p>S. C. Dermatological Association Meeting and Scientific Session</p> <p>“Herpes Simplex Virus in Erythema Multiforme” William Lee Weston, M.D., University of Colorado Medical Center, Denver</p> <p>“A Sensible Approach to Flaps and Grafts” William P. Coleman, III, M.D., Louisiana</p> <p>“Patients From Whom I Have Learned” W. Mitchell Sams, Jr., M.D., The University of Alabama at Birmingham</p>
1:30 p.m.-5:00 p.m. Willow Ballroom	<p>SCMA Workshop: “Primary Care Physicians and High School Athletes”</p> <p>“Update on Risk Management in Sports” Robert H. Hood, J.D., Charleston</p> <p>“Preparticipation Exam” Robert H. Belding, M.D., Orangeburg</p> <p>“Problems Seen in Collegiate Athletes Often Missed or Mistreated” Robert M. Peele, Jr., M.D., Columbia Melissa Martin, A.T.C., USC</p>

SCHEDULE OF EVENTS

Friday, April 27, 1990 (continued)

TIME/LOCATION	EVENT
2:00 p.m.-4:30 p.m. Colleton Room	"Teacher Athletic Trainers" Frederick E. Reed, Jr., M.D., Charleston
	"Equipment for the Sports Trainer" Richard W. Ward, M.D., Myrtle Beach
	S. C. Oncology Society Meeting and Scientific Session:
	"Oncogenes: Current Status and Clinical Relevance" William F. Schmidt, III, M.D., Ph.D., USC School of Medicine
	"Autologous Bone Marrow Transplant in Solid Tumors" David Hurd, M.D., Bowman Gray School of Medicine, Winston-Salem, N. C.
	"Growth Factors: Current Status" Joseph Laver, M.D., MUSC
2:30 p.m.-3:30 p.m. Booths 22 & 42	Coffee Break
3:00 p.m.-5:00 p.m. Beauregard Room	SCMA Workshop: "PRO Update" Thomas G. Morford, Director, Health Standards Quality Bureau Donald K. Wallace, M.D., President of the Board, Medical Review of North Carolina
4:30-6:00 p.m. Second Floor Garden	S. C. Cardiac Rehabilitation Association Reception
5:30 p.m.-7:30 p.m. Home of Dr. & Mrs. A. Bert Pruitt, Jr. 54 Meeting Street	Bowman Gray Alumni Reception
6:00 p.m.-7:30 p.m. Magnolia Ballroom	SCMA Reception (Compliments of C&S National Bank of South Carolina)
7:00 p.m.-8:30 p.m. Drayton Room	S. C. Neurological Association Reception
7:00 p.m. Gadsden Room Jenkins Room Hampton Room Beauregard Room Willow I Room Colleton Room Willow II Room King Room	<i>MUSC Reunions</i> December Class of 1943 Class of 1945 Class of 1950 Class of 1955 Class of 1960 Class of 1965 Class of 1970 Class of 1975

SCHEDULE OF EVENTS

Saturday, April 28, 1990

TIME/LOCATION	EVENT
7:00 a.m.-5:00 p.m. 2nd Floor Grand Hall	SCMA Registration—Open
7:30 a.m.-8:30 a.m. Louis's Charleston Grill	SCMA Board of Trustees Breakfast
7:45 a.m.-8:45 a.m. Booths 22 & 42	Coffee
8:00 a.m.-9:00 a.m. Riley Room	S. C. Chapter of the American Academy of Pediatrics Executive Committee Meeting
8:00 a.m.-9:00 a.m. Beauregard Room	S. C. Radiological Society Breakfast Meeting Guest Speaker: The Honorable Arthur Ravenel, Jr., Representative, First Congressional District
8:00 a.m.-12:30 p.m. Dogwood/Cypress/Live Oak Ballroom and Grand Hall	Exhibits Open
8:00 a.m.-12:00 noon Edmunds Room	S. C. Association of Neurological Surgeons Breakfast Meeting and Scientific Session: "Experience with Automated Percutaneous Discectomy" J. M. Marzluff, M.D., Charleston "Surgical Treatment for Spondylolisthesis" Stephen E. Rawe, M.D., Ph.D., Charleston "Techniques of Spinal Stabilization and Instrumentation" George Sypert, M.D., Fort Myers, Florida
8:00 a.m.-12:00 noon Hampton Room	S. C. Society of Anesthesiology: "The Perioperative Management of Patients with Cardiac Pacemaker" Paul Eckenbrecht, M.D., USC School of Medicine "What's New in OB Anesthesiology" Curtis Baysinger, M.D., USC School of Medicine "Postoperative Pain Techniques" Richard Rauck, M.D., Bowman Gray School of Medicine, Winston-Salem, N. C.
8:00 a.m.-11:15 a.m. Magnolia Ballroom	S. C. Cardiac Rehabilitation Association "Marital/Sexual Issues in Cardiac Rehabilitation" Wayne M. Sotile, Ph.D., Wake Forest University, Winston-Salem, N. C. "Lipids, Life and Longevity" Bill Roberts, M.D., Bethesda, MD "Creative Approaches to Teaching Stress Management" Peggy Dulaney, M.S.N., R.N., C.S., Greenville Memorial Hospital

SCHEDULE OF EVENTS

Saturday, April 28, 1990 (continued)

TIME/LOCATION	EVENT
8:30 a.m.-12:00 noon Willow Ballroom	<p>SCMA Plenary Session: "Infectious Diseases"</p> <p>"New and Emerging Pathogens" Joseph F. John, Jr., M.D., MUSC</p> <p>"Lyme and Other Tick-Borne Diseases in South Carolina" Stanley H. Schumann, M.D., MUSC</p> <p>"Toward Optimum Use of the State Laboratory" Arthur F. DiSalvo, M.D., DHEC</p> <p>"Epidemiology, Pathogenesis and Rational Management of the Common Cold" Ronald B. Turner, M.D., MUSC</p> <p>"Acute Bacterial Infections: Antibiotic Update" Charles S. Bryan, M.D., USC School of Medicine</p>
8:30 a.m.-12:00 noon Gadsden Room	<p>S. C. Neurological Association</p> <p>"Narcolespy" Virgil Wooten, M.D., University of Alabama at Birmingham</p>
8:30 a.m.-12:30 p.m. Colleton Room	<p>S. C. Dermatological Association Meeting and Scientific Session:</p> <p>"Liposuction Surgery—State of the Art" William P. Coleman, III, M.D., Louisiana</p> <p>"What's New in Pediatric Dermatology—1990" William Lee Weston, M.D., University of Colorado Medical Center, Denver</p> <p>"Practical Interpretation of Lupus Serologies" W. Mitchell Sams, Jr., M.D., The University of Alabama at Birmingham</p>
9:00 a.m.-12:00 noon Jenkins/King Room	<p>S. C. Chapter of the American Academy of Pediatrics Scientific Session:</p> <p>"Childhood Abdominal Pain: Campylobacter Connection" Rathna Amarnath, M.D., USC School of Medicine</p> <p>"DNA and the Pediatrician" Robert A. Saul, M.D., Greenwood</p> <p>"Bone Marrow Transplantation for Pediatric Malignancies" Joseph Laver, M.D., MUSC</p>

SCHEDULE OF EVENTS

Saturday, April 28, 1990 (continued)

TIME/LOCATION	EVENT
9:00 a.m.-12:00 noon Fenwick Room	<p>S. C. Society of Physical Medicine and Rehabilitation</p> <p>“Spinal Cord Injury” Robert D. Kukla, M.D., Florence</p> <p>“Functional Electrical Stimulation” Dennis M. Crowley, M.D., Greenville</p> <p>“The Role of Thermography in Sympathetic Dysfunction Syndromes” Robert S. Schwartz, M.D., Greenville</p> <p>“Cervical Radiculopathy” Dixie J. Hines, M.D., Richland Memorial Hospital</p>
9:00 a.m.-12:15 p.m. Drayton Room	<p>S. C. Radiological Society Meeting Scientific Session:</p> <p>“Transvaginal Sonography in Gynecology” Arthur Fleischer, M.D., Vanderbilt University School of Medicine</p> <p>“MRI of Joints” Beverly M. Genez, M.D., MUSC</p> <p>“SPECT Imaging” Kenneth M. Spicer, M.D., MUSC</p> <p>“Current Medical-Legal Issues” Ms. Ann R. Wieseneck, American College of Radiology</p>
9:30 a.m.-11:00 a.m. Louis’s Charleston Grill	SOC PAC Board Meeting
10:00 a.m.-11:00 a.m. Booths 22 & 42	Coffee Break
10:00 a.m.-12:00 noon Beauregard Room	S. C. Society of Pathologists Business Meeting
11:45 a.m.-12:15 p.m. Louis’s Charleston Grill	S. C. Radiological Society Reception
12:45 p.m.-2:15 p.m. Magnolia Ballroom	<p>SOC PAC Luncheon</p> <p>Guest Speaker: Congressman J. Roy Rowland, Jr., M.D., U. S. House of Representatives</p>
1:00 p.m.-6:00 p.m. Jenkins/King Room	S. C. Chapter, American Academy of Family Physicians Board Meeting
12:15 p.m.-3:00 p.m. Louis’s Charleston Grill	S. C. Radiological Society Luncheon and Meeting

SCHEDULE OF EVENTS

Saturday, April 28, 1990 (continued)

TIME/LOCATION	EVENT
2:00 p.m.-4:00 p.m. Colleton Room	S. C. Society of Pathologists Scientific Session: “Molecular Biology for the Practicing Pathologist” William L. Gerald, M.D., MUSC
2:30 p.m.-4:30 p.m. Riley Room	S. C. Chapter of the American Academy of Cosmetic Surgery Moderator: Russell Smith, M.D., F.A.A.D., F.A.C.O.S. (Everyone Welcomed)
2:30 p.m.-5:00 p.m. Drayton Room	S. C. Medical Directors’ Association Meeting “The Elderly and Alzheimer’s Disease” Morris Green, M.D., Ph.D., Medical Director, Daughters of Miriam Center for the Aged, Clinton, N. J. (Supported by Mead Johnson Pharmaceutical Division)
5:00 p.m.-6:00 p.m. Beauregard Room	S. C. Medical Directors’ Association Reception (Sponsored by S. C. Health Care Association)
6:30 p.m.-7:30 p.m. Live Oak Ballroom	SCMA Presidents’ Reception (Compliments of Carolina Physicians Advisory Service)
7:30 p.m.-12:00 a.m. Willow/Magnolia and Live Oak Ballrooms	SCMA President’s Inaugural Banquet

Sunday, April 29, 1990

TIME/LOCATION	EVENT
7:00 a.m.-10:30 a.m. 2nd Floor Grand Hall	SCMA Registration—Open
7:30 a.m.-8:30 a.m. Louis’s Charleston Grill	SCMA Board of Trustees Breakfast
8:30 a.m.-12:30 p.m. Dogwood/Cypress and Live Oak Ballrooms	SCMA House of Delegates
12:30 p.m.-1:00 p.m. Drayton Room	SCMA Board of Trustees Reorganization Meeting

MRI UPDATE

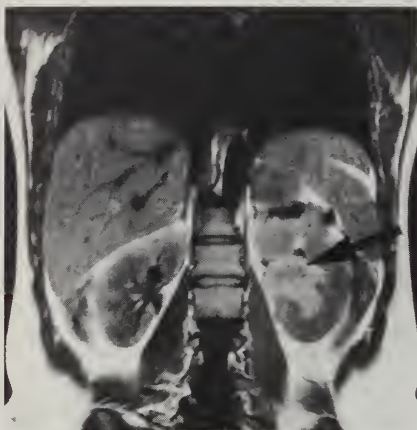


Figure 1

CLINICAL HISTORY: This is a 25-year-old female with complaints of left sided flank pain, nausea, and vomiting.

FINDINGS: Figure 1 represents a coronal T1-weighted image through the kidneys. A lobulated soft tissue mass conforming to the approximate shape of the left renal pelvis and the lower pole collecting system can be identified (large arrow). Signal intensity is intermediate and there is a central area of decreased signal intensity probably representing necrosis. Figure 2 is a sagittal image through the left kidney. In this projection, the soft tissue mass is comma shaped and can be identified extending from the left renal pelvis into the proximal left ureter (small arrows). Figure 3 is a T2-weighted image which

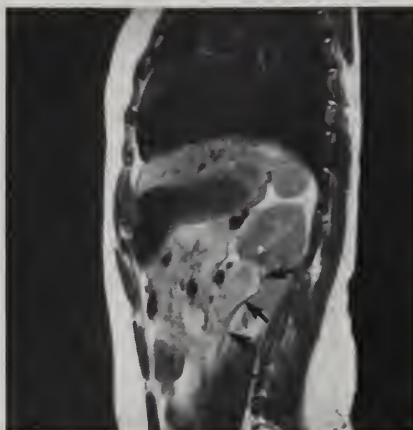


Figure 2

exhibits increased signal intensity in the periphery of the mass and central decreased signal intensity. A curvilinear low signal structure lies medial to the mass and is felt to represent the left renal vein displaced by the mass. The vein appears to be patent as evidenced by the low signal intensity indicative of flowing blood (small arrows). No adenopathy is identified. There is no evidence of extension of the mass beyond the margins of the left renal pelvis or the proximal left ureter.

MR IMPRESSION: The location and shape of the soft tissue mass is typical for a transitional cell carcinoma.

MR NOTES: MR of the kidneys is a noninvasive procedure



Figure 3

yielding both static and dynamic information about the pathologic process in question. In this case, the MR images defined the presence of the soft tissue mass in the left kidney, the confinement of the soft tissue mass to the left renal collecting system and the proximal left ureter, and the lack of invasion into the kidney and the adjacent pararenal soft tissue structures. In addition, the MR scan demonstrated that there is no evidence of thrombosis of the left renal vein nor is there evidence of tumor into the vein. MR imaging of the kidney is a noninvasive procedure allowing both anatomic identification of renal masses, staging of the extent of those renal masses, and determination of the presence or absence of renal vein involvement for surgical planning.



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SCMA

NEWSLETTER

APRIL 1990

HIGHLIGHTS OF MARCH 21 BOARD OF TRUSTEES MEETING

Responding to a report by President-elect John W. Simmons, MD, the Board voted to oppose legislation which would require that any X-ray taken while a person is in the hospital must be read prior to the patient being discharged.

The SCMA will work with DHEC to obtain increased funding for immunizations, family planning and Medicaid. A Joint Resolution has been introduced by Senator Theo Mitchell which would establish a study committee to develop a plan for 100% participation by physicians in the Medicaid program. Meantime, a resolution from the SCMA Medicaid and Indigent Care Committee to the SCMA House of Delegates, if passed and implemented, would hopefully increase physician participation in the Medicaid program.

SCMA Secretary Bart Barone, MD, has written to department chairmen at both medical schools to seek their support of SCMA membership by members of their departments.

The Board voted to contribute \$3,000 from the Hugo Relief Fund to the Charleston Crisis Interfaith Ministry Clinic and \$1,000 to the St. Andrews Christian Clinic in Mount Pleasant. Plans for the remainder of the monies in the Relief Fund will be announced during a press conference at the SCMA Annual Meeting.

William Eckstein, MD, Clay Evatt, MD, and Burland Rush, MD, were reelected to the Board of the Members' Insurance Trust.

MEDICARE UPDATE

April 1, 1990

Reminder to non-participating physicians: If you have received a special charge limit on your Medicare printout for any procedure code, you may not charge more than this, even if your MAAC is higher.

January 1, 1991: Non-participating MAAC Limit

If your current MAAC is more than 125% of the Medicare allowed charge, you can anticipate that you will need to reduce your Medicare fees as of January 1, 1991 to no more than 125% of the approved amount for each service. This is another result of the 1989 Omnibus Reconciliation Act.

The SCMA has written the SC Congressional delegation of our serious concern over this law, especially in view of the planned transition to the RBRVS in 1992.

Correction

Non-participating physicians will be required to submit Medicare claims for care provided on or after September 1, 1990, not October 1, as previously reported.

HCFA Mandated Medical Review Parameters

The SCMA has been advised of individuals who are making HCFA mandated medical review parameters available for purchase to the medical community. The information regarding mandated parameters that is for sale has not been supplied by HCFA and may not be accurate.

Specialty Workshops

Medicare is sponsoring specialty workshops at different locations around SC this spring. The workshops will cover specific information pertaining to each group, but will cover medical necessity, instructions on coding procedures and diagnoses codes, and a general overview of the Professional Service Manual. Workshops for family practice, general practice and pediatrics will be held in Florence (April 11), Beaufort (April 13), Charleston (April 18), Greenville (April 25) and Columbia (April 27). Columbia will also host workshops for urologists (May 2), psychiatrists (May 30) and internists (May 9). Additional workshops for internists will be held in Greenville (May 17) and Charleston (May 23). For additional information, call Medicare Part B in Columbia at 754-1968.

Medicare questions should be directed to Barbara Whittaker at SCMA Headquarters.

MEDICAID UPDATE

Billing for Emergency Room Services

The 1990 edition of the physicians' Current Procedural Terminology (CPT) manual has changed the way that private physicians are to bill for emergency room services. However, the State HHSFC requests that you do not implement these changes until July 1, 1990 when billing for emergency room services provided to SC Medicaid recipients. Examples of how you should bill both before and after July 1, 1990 follow:

Before July 1: (1) Bill using one of the following codes: 99062, 99064 or 99065 and (2) bill using a code from the range 90500-90580 depending on the patient's status and the level of service performed.

After July 1: (1) Bill using one of the following codes: 99062, 99064 or 99065 and (2) bill using a code from the range 90000-90080 depending on the patient's status and the level of service performed.

Contact Barbara Whittaker at SCMA Headquarters if you have questions regarding Medicaid.

UR FIRMS TO ESTABLISH VOLUNTARY ACCREDITATION COMMISSION

Reacting to the threat of government regulation, a group of utilization review firms announced plans in late February to form a voluntary accreditation commission in 1991. The operations of the Utilization Review Accreditation Commission, which was modeled after the Joint Commission on Accreditation of Healthcare Organizations, will be financed by the fees it charges firms that apply for accreditation.

The commission's board will be composed of executives from UR firms, but it plans to expand the membership to include representatives from the physician, hospital, insurance and business communities.

The voluntary approach was devised as an alternative to government regulation. Arkansas and Maryland, as well as SC, already require UR firms to meet certain standards of operation, and 14 other states are considering a similar strategy.

LOCUM TENENS MALPRACTICE INSURANCE COVERAGE

The JUA and PCF will provide Locum Tenens coverage to an insured's temporary substitute without additional charge to the insured or the temporary substitute.

PCF Locum Tenens coverage will be provided only upon receipt of a written request from the PCF member which contains the name and address of the temporary substitute and the specific dates that the substitute will replace the member. This written request must be submitted to the PCF prior to the substitution dates and Locum Tenens coverage cannot be provided on a retroactive basis if the request is made late.

JUA Locum Tenens coverage can be requested by your JUA insurance agent, but this also must be requested prior to the substitution date.

Direct questions to the JUA (256-6311) or the PCF (737-6264) in Columbia.

FROM THE OFFICE OF LEGAL AFFAIRS

Medical Records

On March 16, 1990, the SC Attorney General issued an opinion

concerning the allowable charges for making copies of medical records.

The Attorney General has concluded that the maximum allowable charge provisions contained in last year's automobile insurance reform legislation pertain only to copies of medical records arising out of an automobile insurance claim.

Thus, SC law now has various provisions relating to allowable charges for copies of medical records, depending on how the accident, illness or injury occurred resulting in the visit to the physician.

I. In cases arising from an automobile insurance claim, the maximum allowable charge is fifty cents per page, with a minimum allowable fee of 10 dollars.

II. In cases arising from a workers' compensation claim, the maximum allowable charge is fifty cents per page, with a minimum allowable fee of five dollars. (The SCMA is currently sponsoring legislation that would raise the minimum fee in workers' compensation cases to 10 dollars, the same as the automobile provisions above. As of the date of publication, this bill had passed the House and was currently being considered by the Senate Judiciary Committee.)

III. In all other instances, there is no state law covering allowable fees for making copies of the medical record.

PA's and PC's: Reminder

In 1988, the SC Legislature substantially revised the laws governing corporations, partnerships and professional associations.

The law now requires all professional corporations (including professional associations) to file a copy of their Articles of Incorporation with the licensing authority with jurisdiction over service rendered by the professional corporation. For physicians and osteopaths, this entity would be the SC Board of Medical Examiners.

Additionally, the law requires each professional corporation to file an annual qualification statement containing the names and addresses of its officers and directors and information required by the licensing authority.

If you do business as a professional association or professional corporation, you should contact your legal advisor to ensure you are in compliance with the new laws.

Please call Steve Williams at the SCMA if you have questions about these provisions.

LEGISLATIVE UPDATE

Drug Sample Labeling Exemption Bill

H.4425, designed to exempt non-controlled drug samples from state labeling requirements when dispensed at no charge by a physician to his patient, was passed by both Houses on March 21, 1990 and ratified on March 29, 1990. It is presently awaiting the governor's signature.

Independent Practice for Physical Therapists

The subcommittee "adjourned debate" on H.3482 on March 28, 1990, thus effectively killing the bill for this session.

Questions on legislative issues should be directed to Jan McKellar or William Mahon at the SCMA.

MEETINGS AND CONFERENCES

The SC Association of Medical Managers Annual Spring Meeting will be held May 7-8, 1990 at the Sheraton Riverfront in Charleston, SC. "Effectively Managing Conflict" presentations by state insurance representatives and practice management breakouts will be featured. Contact Robert Hendrickson (242-4122 in Greenville) or Paul Shaw (269-9239 in Easley) for information.

Early care for the HIV-positive patient will be the theme of AMA's 2nd Annual HIV Conference June 18-19 at the Westin Hotel in San Francisco. Program topics will include treatment guidelines and medical, psychiatric and testing issues. Registration fee is \$200. For additional information concerning the conference, please call Eileen Keane at (312) 645-5478.

The Emory AIDS Training Network provides a two-day clinical tutorial with one-on-one clinical experience with patients throughout the spectrum of HIV infection. Highlights of the tutorial include clinical recognition of common infections in the HIV-infected patient, continuing care of the patient on AZT, diagnosis of opportunistic infections in AIDS patients and didactic sessions. The tutorials are held at Grady Memorial Hospital Infectious Disease Clinic, Emory University School of Medicine, Atlanta. Registration fee is \$150. To apply, call the Emory AIDS Training Network at (404) 727-2929.

VIDEO AVAILABLE

"Ninety Years of Progress," a 12-minute video documenting the medical and scientific achievements in the US since the turn of the century, is available on loan from SCMA Headquarters. Developed as part of the AMA's program to strengthen the US health care system, the video opened the AMA's 1990 National Leadership Conference in Phoenix, Arizona in February. To view the tape, call Kim Fox or Joy Drennen at the SCMA.

CAPSULES

William H. Hester, MD, director of McLeod Family Medicine Residency Program and former member of the SCMA Board of Trustees, was selected by Governor Carroll Campbell to receive the Order of the Palmetto, the highest award given by the governor to someone for service to South Carolina.

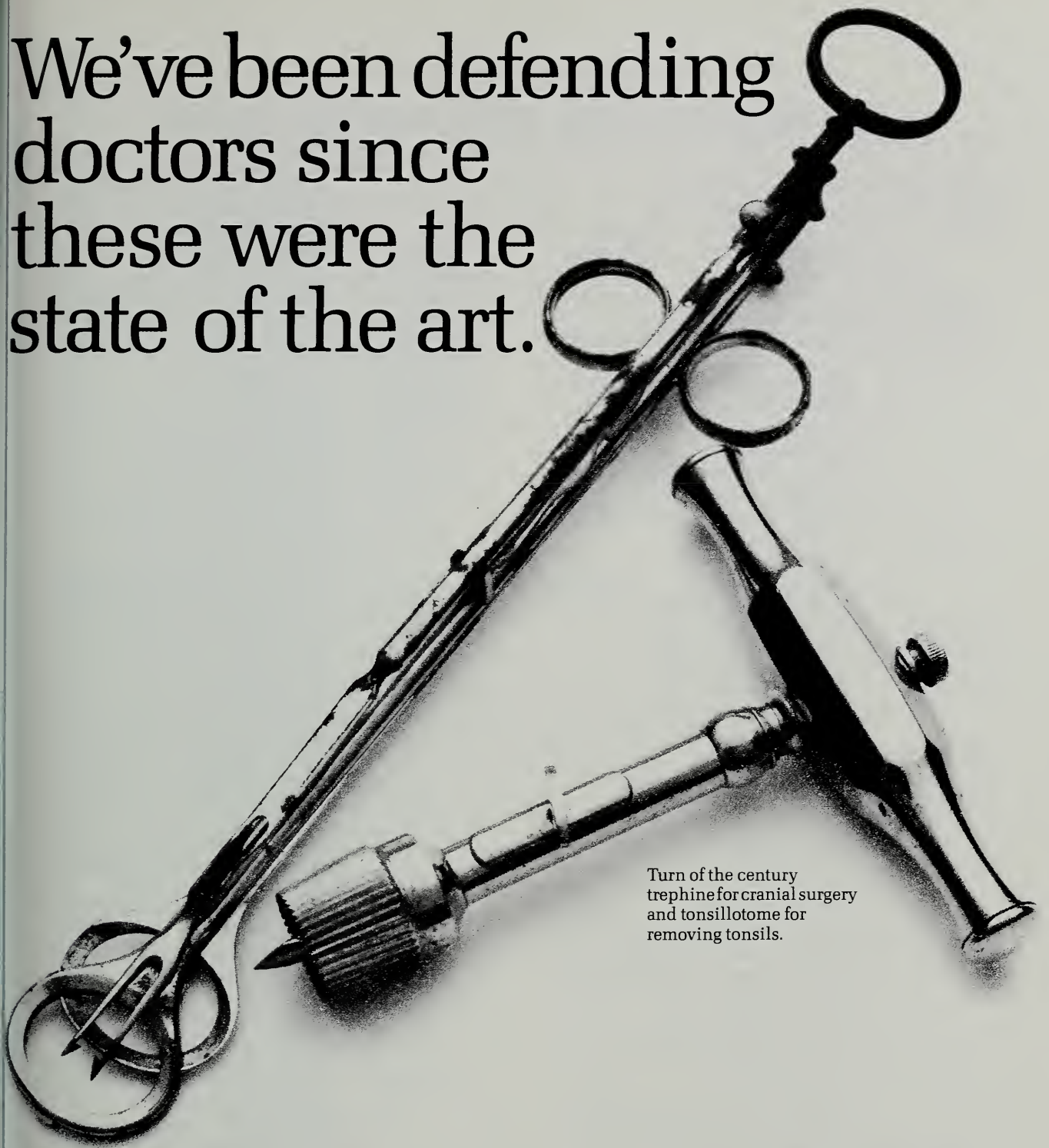
Congratulations to Bamberg and Chester County Medical Societies for achieving 100% membership in the SCMA for 1990.

SCMA NEWSLETTER

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			Alternate: Thomas B. Harper, M.D.

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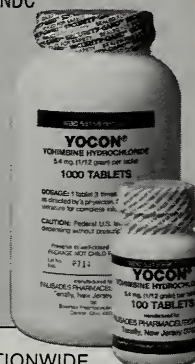
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

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References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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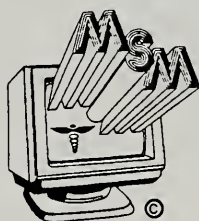


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OFFICER REPORTS

THE PRESIDENT

It has been a privilege for me to serve as your president this year. I have been impressed with the development and the maturity of the SCMA over the past five to 10 years. We have an active, effective organization which responds rapidly to our needs, and I'm proud of it.

This year has been an exciting year for me personally as your president. I would like to mention some of the highlights of the year but devote most of my time to Health Care 2000. My first job as your new president was to meet with Governor Campbell at a news conference to announce our participation in his Infant Mortality program—Caring for Tomorrow's Children. The SCMA is disturbed by our infant mortality rate in South Carolina, and we are eager to participate in any program that will encourage women to come in for prenatal care early in their first trimester of pregnancy. A number of the SCMA programs have been well received by the public and the Legislature. The Health Education Van—the dream and result of hard work by our auxiliary—has received praise from the Department of Education as well as the Legislature. Betsy Terry and I were present when the van was presented to the Department of Education. This should serve to facilitate health education of our children.

Our Personal Care plan allows Medicare patients who fall below 150 percent of the poverty level to receive a Personal Care card. Participating physicians agree to accept assignment on these low income patients. This guarantees all low income Medicare patients the opportunity to receive health care services which are frequently provided below the physicians' cost. It is important for us to participate in the Personal Care plan and take care of these low income patients. If we are accepting assignment on the low income Medicare patients then Medicare mandatory assignment is unnecessary.

For the past four years, as chairman of the board for two years, president-elect and president, I have attended every AMA Annual and Interim Meeting. I have been impressed with the strength of this organization. Dr. John

Hawk, the Chairman of the SCMA Delegation, has reported to you about the AMA activities in *The Journal* so I will not mention these in this report. I would be remiss if I did not tell you how proud we are of our Delegate, Dr. Randolph Smoak, who is Chairman of AMPAC, the political arm of the AMA. With socialized medicine on the horizon, we need strong representation on a national level and I encourage you if you are not a member to join the AMA.

I would like to mention a few items that I know have been important to you and which demonstrate how rapidly the SCMA responds to your needs. When the Board of Medical Examiners reported to us that state law prohibits physicians from dispensing sample drugs without labeling, the SCMA took immediate action. We introduced a bill to remove non-controlled samples from the labeling law. (We hope this bill will be law by the time you read this report.) When you were notified that Medicare required physicians to bill when they covered for other physicians, the SCMA contacted our Congressional Delegation to support H.R. 3980 and S. 2051 which would repeal this law. In 1984, Medicare froze physician fees and continued the freeze in 1986 with the passage of the MAAC. Since then physician office fees have only increased about sixty-six cents. This low reimbursement for certain specialties is resulting in a number of physicians having to limit the number of Medicare patients they see in their office. SCMA has worked with Congressman Butler Derrick to introduce H.R. 1811 which would repeal the MAAC.

When physicians began complaining about problems with out-of-state precertification and UR agencies, the SCMA introduced a bill to require out-of-state agencies to be certified by the South Carolina Insurance Commission and meet standards set by the commission. That bill is now a law which will give us some control over these 200 plus out-of-state agencies currently doing review in SC.

I could go on and on about the accomplishments of the SCMA but I told you I wanted this report to emphasize Health Care 2000. Before

moving to Health Care 2000, I would like to point out one of the important reasons the SCMA has become so effective and that is our excellent staff. I would like to thank Barbara Whittaker, our Associate Executive Vice President, and the rest of the staff for all of the help and support they have given me this year. I would like to say a special thanks to Bill Mahon, our Executive Vice President, who serves us tirelessly. He is always thinking of ways to help the doctors and patients in South Carolina. I might add many of the recommendations Bill makes to us only increase his workload. This year Bill has chauffeured me all over the state and I have developed a friendship that will last forever. A special thanks to you, Bill.

Last year at our Annual Meeting I told the House of Delegates that I would form a committee to evaluate our health care system and report back to you at this meeting. When I formed Health Care 2000 I knew our health care system was in crisis situation and many people were looking for ways to change it. The news media and government were raising the issue of socialized medicine as a solution for the problems in our system. I didn't realize two other committees were being formed in our state, one by Senator Saleeby and one by Senator Leatherman. I spoke at the opening meeting of Senator Saleeby's committee and he asked me to serve on that committee and chair a subcommittee. Bill Mahon sits on that committee with me. Senator Leatherman asked our past president, Walt Roberts, M.D., to serve on his committee. It is important that we have physician representation on all committees that discuss health care. These committees reinforce my belief that by the year 2000 there will be tremendous changes in our health care system. At our first Health Care 2000 meeting I asked the providers, payors and consumers of health care to meet with us. We had representatives from Medicare, the AARP, private insurance companies, the business community, the state government, hospital administrators, nursing homes, nurses, physicians and lawyers. We called this committee Health Care 2000. At our first meeting I asked the members to take off their special interest hats, become Americans and look at our health care system, as well as those in Canada and England, and make a recommendation regarding the type of

health care system we would like to see in this country. I am extremely proud of this committee because they did exactly what I asked them to do, and we were able to make some recommendations that I will be submitting to a reference committee this afternoon. A copy of Health Care 2000 is on the table.

I think it may be helpful this morning if I give you a brief overview of the problems with our system so that you will better understand the recommendations of this committee. First, let me state that in looking at the socialized systems in Canada and England the committee felt that these were not suited for this country. I do not have time this morning to explain all the reasons we were opposed to these systems but I will mention a few. The long waiting periods for procedures that improve quality of life—such as a hip prosthesis, or prevent death—such as coronary bypass surgery, are totally unacceptable to us. It is also noted that many Canadians who can afford to pay for their health care come to America to receive it.

In evaluating all of the confusion, harassment and paperwork our government has introduced into the health care system with Medicare and Medicaid, it is obvious that we certainly would not want this type of system for all Americans. The committee felt that government should provide only for people who are unable to provide for themselves.

In evaluating our current systems, the committee agreed that the U.S. system costs too much and we need to find ways to decrease the cost without affecting the quality of care or access to care. We also found that the distribution of the health care dollar is inappropriate because a number of people are receiving health care through programs that do not pay a fair share. As far as redistributing the health care dollar, we found that approximately 37 million Americans were uninsured or inadequately insured and that 53 percent of all hospital days were used by Medicare and Medicaid patients. As a result, about 35 percent of hospital admissions are paying not only for their health care but also supplementing Medicare/Medicaid, the uninsured and inadequately insured. Obviously, in looking at Medicare, there are a number of Medicare patients who are living on Social Security who cannot afford to pay for their health care. There are

also 300,000 plus millionaires over 65 receiving health care that is subsidized by the government.

Our experience with Medicare and the government over the past 20 years is typical of what happened in Canada and England. When the government runs out of money they decrease the reimbursement to the provider, as we have seen Medicare decrease payments to roughly 50 percent of charges over the past 20 years for most physician services. Medicare recipients began complaining that Medicare wasn't paying enough. Congress, being aware of the political clout of the elderly, but having no funds, froze physician fees.

The public does not realize that reimbursements for services such as an office visit have only increased about sixty-six cents over the past six years and have resulted in cost shifting to the private patients. When Medicare started, we had 12 working people for each Medicare recipient. We are now down to four and that number is expected to decrease to two by the year 2000. One of the problems is that the working people who are funding the Medicare program are not organized and have no means to petition Congress for changes which would give them financial relief. I hope Congress will respond to the working people who are funding the health care system when they demand that it be changed.

The working people who are financing the health care system in this country are going to have to convince the Medicare population, the AARP and the government that they cannot continue to carry this heavy burden. We are all going to have to pay our fair share for the health care system and stop this tremendous cost shift.

Because of the low payments to physicians under the Medicare and Medicaid system, we are starting to see physicians leave certain areas where there is a high percentage of those patients. I think in the near future the Medicare population will see physicians having to limit the number of Medicare patients they can afford to keep in their practice. Physicians do not want to accept patients based on their insurance coverage; however, if a physician has high percentage of Medicare and Medicaid patients whose payments do not cover the cost of providing that service, he cannot afford to

keep his office open. A typical example is a family physician in a rural area of South Carolina who had been practicing there for 25 years. He recently went bankrupt and had to leave his practice because of his high percentage of Medicare/Medicaid patients. As the problem becomes critical we may see the AARP and others involved in lobbying Congress start paying a dollar for a dollar's worth of service in the Medicare program. If that happened, Congress would have to go back to the recipients and ask them to start paying a portion of the costs based on their income. I ask the Medicare recipients, are you willing to do this? Health Care 2000 will address this issue by recommending a system based on a means test so that Medicare patients on a limited income will be able to have insurance within their ability to pay, and physicians would assist them the same way they assist other indigent patients.

Because of the cost shifting that is taking place, the 35 percent of people who pay for Medicare/Medicaid are finding it more difficult to pay their rising health insurance premiums. We are, therefore, seeing more people go uninsured which increases the burden on the patients who have insurance. We must put the people who are unable to pay for their health care on a government system that is funded properly and that adequately reimburses the services which are provided. The Medicare patient who has financial means should contribute to the system on a pro rata basis to reduce costs to the 35 percent we have been discussing. All people should be required to have health insurance just as they are required to have automobile insurance. A basic benefit health plan should be established, and I am asking that you form a committee to design such a plan for this state.

I have been talking about redistributing the health care dollar, but this is only part of the problem. We must also decrease the cost of health care. Since we as physicians admit patients to the hospital and order all the tests, we must be diligent in asking ourselves "are the tests I am ordering really necessary and will these tests affect the quality of care I provide for this patient?" We must re-evaluate the use of cardiopulmonary resuscitation and heroics in medicine. We spend a tremendous amount of money keeping terminally ill patients alive

at enormous expense to the health care system and only add to the trauma of the patient and their families. Transferring patients from nursing homes to hospitals when they are comatose, being tube fed, or have no chance of recovery, in my opinion is a tremendous waste of health care dollars. We must re-evaluate the levels of care in hospitals, nursing homes and boarding homes and insure care is provided at the appropriate level. To do this, nursing homes must be reimbursed adequately when patients are receiving that level of care. There also should be more attention paid to preventive medicine as recommended in the Health Care 2000 report.

By now I am sure you realize this is a very complicated issue and I have only touched the surface, but it is one that we should not throw up our hands, as some have, and ask the government to take over our health care system. We should work hard to correct the problems in our current system.

I am concerned about the health care I will receive in my older years. I am concerned about the health care my children and grandchildren will be able to receive in this country, but as physicians we cannot solve the problem alone. We need the support of the AARP, the Medicare beneficiary, business, all providers

and consumers of health care. Therefore, I challenge the physicians in this state, hospitals, nursing homes, nurses, insurance companies, business and industry, Chambers of Commerce, Medicare beneficiaries and the AARP to join forces so that we may move together to correct the problems in our health care delivery system. This afternoon we can accept that challenge by looking at the recommendations for Health Care 2000 and bringing a report back to this House of Delegates Sunday morning that authorizes SCMA to take this report to all parties involved and move towards encouraging state and federal legislation to correct some of the problems in our current system.

I thank you for allowing me the privilege of serving as your president this year, a year I hope you will remember as one that was the catalyst for positive changes in the health care delivery system and, more importantly, the medical profession. Serving you has been an honor that I will always cherish. As your new President, Dr. John Simmons, takes office, I pledge my support and know he will serve us well.

Respectfully submitted,
Daniel W. Brake, M.D., President

THE SECRETARY

The past year has once again brought accomplishment to the membership of SCMA. Our active committees, staff, leadership and general membership have continued to work effectively to preserve a practice atmosphere to be envied by physicians in other states.

The Risk Management Committee and the JUA are actively working together to provide decreased malpractice premiums for physicians just completing their residency training who either complete a risk management course or are members of the SCMA. This proposal should help increase SCMA membership.

I am currently working with the JUA to try to provide some type of malpractice coverage for retired physicians who provide charitable care.

One other effort to increase SCMA membership is the 1990 SCMA/AMA Membership Recruitment program. This contest will run from June to September 1990. Information on

this program will be made available at the Annual Meeting. It is hoped with the attractive prizes to be awarded this will bring in many new members.

In an effort to increase medical school faculty membership, I have written to all department chairmen asking for their membership and urging them to ask their department colleagues to join.

Membership in the SCMA continues to grow, but we still have a long way to go in convincing our non-member colleagues to join with us and become active participants in their local, state and national medical associations.

It has been my privilege to serve as your secretary this past year, and I would like to thank the Board of Trustees, SCMA membership and SCMA staff for their hard work.

Respectfully submitted,
Bartolo Barone, M.D.,
Secretary

THE TREASURER

As I complete my first year as Treasurer of the South Carolina Medical Association, I would like to present a short report about the SCMA's financial condition. A more comprehensive report will be presented to the 1990 House of Delegates in Charleston.

For the year ended June 30, 1989, the SCMA had net expenses over revenue including depreciation of \$153,372. However, if you exclude depreciation expense of \$29,811 the SCMA had net operating expenses over revenue of \$123,561. The SCMA had a Fund Balance of \$1,333,638 as of June 30, 1989.

The SCMA's current financial condition for the seven months ended January 1990 projects a negative financial position. At the end of January, the SCMA had expenses over revenue of \$40,465. We currently project that the SCMA will have net expenses over revenue of \$85,000 for this fiscal year.

The investment policies of the SCMA and its affiliates have continued in a similar manner, as in past years, with diversified investments in federal treasury and agency notes and money market funds. As of June 30, 1989, the SCMA's permanent and operating reserves had balances of \$1,100,000 and \$233,638 respectively.

It is the SCMA's policy to maintain total reserves equal to one year's operating budget and any excess should be allocated to cover future operational deficits. Therefore, the permanent and operating reserves will remain constant for the year ending June 30, 1990.

The House of Delegates in 1988 approved a dues increase of \$100 to be implemented fractionally over a period of three years. The first period to benefit from this increase is the January-June, 1990 period. The fact that this is the first dues increase since 1977 is remarkable in itself, and one in which we all should take a great deal of pride. We have a history of operating on a sound financial basis and, with this increase in receipts, we shall continue to do so.

For the fiscal year ending June 1991, we project a balanced budget which is a great improvement over the loss of the previous fiscal year, and in the following year, we should see a surplus. Also it is with great pleasure to say the membership of this organization, along with

help from other states, raised in excess of \$37,000 to assist in the help of Hurricane Hugo victims.

I thank the membership for the privilege of serving as your treasurer for the past year.

Respectfully submitted,
John W. Rheney, Jr., M.D.,
Treasurer

THE CHAIRMAN OF THE BOARD

Each year the chairman reports that the Board has been very active, and this year was no exception. The Board's responsibility is to carry out the directives of the House of Delegates, to set broad operating and program policies for the SCMA, to monitor achievement of goals and objectives, and to evaluate SCMA programs to determine if they meet the needs of its members. The Board meets in odd months, plus the day before and daily during the Annual Meeting. In the past the Board meetings lasted all day, but for the past two years the meetings have been scheduled for the afternoon only and the shorter format has proved satisfactory.

In April the Board of Trustees decided to have a detailed evaluation of the McManis Report (SCMA Strategic Plan 1984-1988) as the first step in long-range planning for the next decade. The McManis Report outlined seven strategies for growth and development of the SCMA in the period 1984-1988:

1. Strengthen governmental representation.
2. Develop a strong public relations program.
3. Develop a plan to address the reimbursement and payment issues facing physicians.
4. Take steps to maintain quality care in a changing environment.
5. Evolve a plan to address malpractice problems.
6. Expand and improve efforts to monitor the changing environment and communicate trends to members.
7. Expand membership and increase membership participation.

The task force appointed for the preliminary evaluation suggested that the Board make a commitment to annual planning and reevaluation with outside assessment obtained from an organization like McManis about every five years. The Board planned to have this internal evaluation at the September Board Retreat, but Hurricane Hugo cancelled the retreat. The Board eventually completed the initial review at the regular November and January Board meetings. Overall the Board felt that the SCMA had made major progress on these seven strategies during the past six years but felt it was time for an outside evaluation. We hope this evaluation can begin in May and be completed in time to be the major topic at the next Board Retreat.

Last spring, proposed S. C. House Bill 3599 was designed to offer a patient privilege for confidences told to a physician when the patient was being treated for an emotional or mental condition. Initially the Board supported the bill, but the JUA defense attorneys felt it would not guarantee patient confidentiality but would create problems in defense of malpractice suits. After much review and discussion, the Board voted to request deletion of physicians from the bill, which was then passed by the Legislature.

The issue of patient confidentiality continued to be a problem. Before the SCMA House of Delegates passed the Principles of Medical Ethics in 1988, the Board of Trustees had been warned that plaintiff attorneys may use our code of ethics and patient confidentiality as an issue to try to prevent defense attorneys from having *ex parte* discussions in medical malpractice cases. The South Carolina courts in recent decisions have allowed *ex parte* discussions in two cases and denied them in one. Any limitation on *ex parte* discussions makes a malpractice defense more difficult.

The SCMA Board of Trustees did not feel a code of ethics should be used by one party to gain advantage over another and adopted the following clarifying statement:

"A physician against whom a suit has been filed is entitled to defend himself, and may ethically discuss the patient's treatment with an insurance representative, the defense attorney, and other physicians.

Any treating physician and defendant physician may discuss *ex parte*, to the extent allowed by law, matters within the scope of the lawsuit.

Physicians should act with integrity, honesty, and on the basis of the free exercise of their own best judgment in deciding the manner and content of communication with others relating to the patient's medical care."

This statement supports the traditional confidentiality of doctor-patient relationships, without placing unfair constraints on the physician.

The Board spends considerable time discussing active and proposed legislation, particularly during the spring months when the Legislature is in session. During the past year we have been very successful in our legislative efforts. The Infectious Waste Bill was passed with a small generator exemption of 50 pounds a month, which should cover most doctors' offices. The Utilization Review Bill which we drafted last year was passed this year and is designed to make the UR process less cumbersome for physicians by regulating the UR companies. The SCMA will be working with the South Carolina Insurance Commission as it establishes the regulations.

In response to the Board of Medical Examiners' directive requiring labeling of drug samples, the SCMA has introduced a bill to make it legal to dispense non-controlled drug samples without any special labeling. The bill is moving through the Legislature and is likely to be passed this year.

Most of the onerous regulations concern Medicare and come through the Congress-HCFA-Medicare carrier pipeline. We work through the AMA and our South Carolina Congressional Delegation on these issues. Unfortunately, no one on the South Carolina delegation is on the committees which handle health issues. By the time the laws are included in the Omnibus Budget Reconciliation Act, our congressmen really have no vote.

The SCMA sent a delegation to the 1989 AMA National Political Education Conference in Washington in October. We met with all the members of our Congressional Delegation and attended the conference. We also write to the Congressional Delegation on a

regular basis concerning important health legislation. The Congressmen seem genuinely interested in the problems which the laws have created for physicians and Medicare beneficiaries, but unfortunately most of the important decisions are made in the Congressional committees or by HCFA when it interprets the Medicare law. The recent Medicare policy that the "attending physicians may not bill for the services of independent physicians who cover for them" is a good example. Apparently HCFA is basing this rule on the original Medicare law which specifies only the physician who provides the service may bill for the service. The SCMA has asked our Congressional Delegation to cosponsor legislation that would change this policy.

Last year the Board of Trustees approved a resolution to the AMA requesting immediate action by HCFA, and if necessary by Congress, to withdraw the requirement for inclusion of the referring physician's identification number on Medicare claims of radiologists, pathologists, independent laboratories and other physicians when a patient was referred by another physician for consultation or treatment. This requirement created problems across the United States as everyone had considerable difficulty and delay in obtaining the identification number of the referring physician. The AMA House of Delegates voted to adopt the resolution. Although the requirement has not been waived, it is still in its intermediate phase of implementation and not mandatory.

The Board of Trustees has strived to maintain a good working relationship with the Board of Medical Examiners. We worked with them for successful passage of a bill to modify the SPEX and FLEX requirements for licensure. The Board will continue to meet with them on a regular basis.

The Board of Trustees has also supported Medical Review of North Carolina as the new PRO. William Goudelock, M.D., and John Simmons, M.D., are the South Carolina physicians on the PRO Board, and we have requested additional South Carolina representation. Dr. Jack Rheney, a member of the SCMA Board of Trustees for six years, is the new Medical Director of the PRO for South Carolina, and clearly knows the physicians' view on various issues. Unfortunately, the review re-

quirements get worse each year, and the PRO does have to enforce them.

The Board anticipated that activity in the South Carolina Legislature on abortion may increase after the recent U. S. Supreme Court decision on the Missouri abortion law. At its November meeting the Board adopted the following position for the SCMA on abortion:

"Abortion is a medical procedure. The South Carolina Medical Association therefore believes the procedure should be performed only by a duly licensed physician in conformance with recognized standards of good medical practice.

However, a physician should not be required to perform any act violative of good medical judgment or personally held moral principles. In those circumstances, good medical practice requires only that the physician or other health care professional withdraw from the case so long as the withdrawal is consistent with good medical practice."

The SCMA sponsored its annual leadership conference in Columbia on February 15. The chairmen of Senator Leatherman's and Senator Saleeby's committees on health care costs presented reports on their respective committee's work. The SCMA has had representation on both committees and will be evaluating carefully any proposals from them.

Dr. Brake's committee, Health Care 2000, has been meeting regularly throughout the year and has a report to be considered at this Annual Meeting.

The SCMA sent John Simmons, M.D., Chris Hawk, M.D., Ed Catalano, M.D., Bart Barone, M.D., Bill Mahon, and Barbara Whittaker to the AMA Leadership Conference in February. The theme was "Strong Medicine" and the main issues discussed were access, quality, and cost. There seemed to be a general agreement among the speakers that a major change in the health care delivery system is coming in the next decade, but no one seems to know what it will be. The AMA has developed a sixteen-point proposal called "Health Access America," designed to strengthen the current health care system, rather than dismantling it or importing a new system from another country. You will be hearing more about it in the months to come.

In South Carolina we have a problem with access in the Medicaid program. In many parts of the state, Medicaid patients cannot get a physician to see them. The Medicaid Committee of the SCMA and the Board of Trustees will be presenting a proposal soon to deal with this access problem. The situation is quite variable in different counties, and it seems likely that any solution will need to involve each county medical society getting its members to participate in a local solution to the problem. If we South Carolina physicians do not solve the Medicaid access problem, then mandatory Medicaid participation as a condition for licensure will be seriously considered.

The Board continues to evaluate new benefit programs for members. The MIT is growing steadily and offers an excellent health insurance package at a competitive cost. The claims administration is now done in-house and has already resulted in considerable savings for the MIT.

The SCMA Board was scheduled to have its Annual Retreat in conjunction with the Trustees, Administrators, and Physicians Conference of the South Carolina Hospital Association. The TAP Conference was postponed because of Hugo, and I attended as the SCMA representative in November. The program included ethical issues for physicians and hospitals, the organ donor program, and a look at the future direction of health care in this country. If your hospital does not participate in this conference, I would strongly encourage you to suggest it to your hospital administrator.

After Hurricane Hugo we were concerned that many physicians may face major financial problems because of damage to their offices and equipment and loss of income from disruption of services. The Board established a \$500,000 Hurricane Damage Loan Fund to aid SCMA members and arranged for an additional \$500,000 from the AMA if needed. Thus far the SCMA has loaned \$126,000 to twelve of its members.

In addition to the loan program for physicians, the Board also established a Hugo Relief Fund through SCIMER for donations to be used for medical and other needs for victims of the hurricane. Over \$37,000 has been donated, with about twenty percent coming from outside South Carolina. The money has been used

to support a MUSC Psychiatry Department program on Post-Hurricane Stress Disorder and a Food Bank program of the Auxiliary. The remaining money will be dispersed to worthy charitable organizations by the time of the 1990 Annual Meeting.

One of the duties of the Board is to evaluate the executive vice president. We have worked out a format for annual evaluation with the EVP submitting a summary of his activities, and the Board then evaluating his performance. Bill Mahon again received high marks in all categories, and the Board has reaffirmed its confidence in him. The SCMA staff under Bill's leadership does an excellent job of supporting the Board of Trustees and the membership and carrying on the daily activities of our organization.

I think you can see from this report that the Board of Trustees has been very active in many areas. We have attempted to keep the membership updated through the expanded SCMA newsletter in *The Journal*, periodic Legislative Updates, and direct mail to the membership about important issues.

I appreciate the opportunity to serve as Chairman of the Board for the past two years, and particularly for the support of the SCMA staff and the Board of Trustees.

Respectfully submitted,
J. Chris Hawk, III, M.D.,
Chairman of the Board

THE SPEAKER OF THE HOUSE

The 142nd Annual Meeting and Scientific Assembly of the SCMA will be held April 25-29, 1990, in the Omni Hotel at Charleston Place. This is the fourth year our meeting will be held in this charming setting. The scientific sessions and social events should generate excitement and enthusiasm. Dr. Gerard Jebaily and his CME Committee have arranged an outstanding array of academic and clinical talent to update us in various aspects of medicine. Dr. Julia Connelley will present our fourth annual Leonard Douglas Memorial lecture at the Thursday morning House of Delegates. We will be privileged to have Dr. Alan Nelson, President of the AMA, with us for a portion of

the weekend. In addition to the scientific workshops, there will be major sessions on wellness, ethics, risk management and disaster planning. At the Saturday night President's Banquet, our President-elect, Dr. John Simmons, has arranged a very special evening with Dr. Ferrol Sams, author of *Run With The Horsemen*, *The Whisper of the River*, and two collections of short stories. Please make your plans to share all of this and more with us in Charleston.

Your Board of Trustees, officers and staff have worked this year to implement those resolutions and recommendations adopted by the House of Delegates at its 1989 meeting. You adopted a recommendation of the president that a relationship be established with Blue Cross/Blue Shield of S. C. You directed the board to implement this and a liaison committee has been established. You also adopted resolutions regarding finding alternatives to corporal punishment in S. C. schools and promoting smoke-free health care facilities in our state. You referred to the Sports Medicine Committee a resolution that required a medical history and standard questionnaire prior to participation in high school sports events in S. C. The House of Delegates also reaffirmed the SCMA's position against the use of anabolic steroids for enhanced performance in sports activities.

As you peruse the resolutions from last year and listen to various staff and officer reports including that of our executive vice president, you will undoubtedly see that the directions you set for our association have resulted in

numerous successes this year. Our organization has had a very positive influence on our State Legislature in matters regarding the well-being of our patients and practices. The effects of our tort reform activities will soon be reflected in our professional liability insurance premiums. Your president, president-elect and board chairman, along with key staff, have accessibility and credibility with our Congressional Delegation in Washington.

Your full-time staff of SCMA continues to work to insure that the House of Delegates functions as a completely representative body for our membership. We have had an increased interest in our body from the specialty society delegate representation again this year and this is particularly pleasing. We want to continue to enhance the spontaneity and effectiveness of our body and to enhance the opportunity for individual delegate input. In these and other matters we again owe a debt of gratitude to our Executive Vice President, Bill Mahon, and the staff that serves us so well. Day in and day out, through many difficult negotiations, plans and activities, these men and women are guarding our interests and those of our patients. When you see them at this meeting, don't forget to thank them for what they do for us.

Respectfully submitted,
O. Marion Burton, M.D.,
Speaker of the House

For Physicians Only

Let's face it. The frustration of primary pain and disability is a two-way street. Not only does the patient complain of intractable pain and disability, but after repeated treatments, efforts, concern, worry, and time, it's hardly surprising that you often feel much like the patient — **FRUSTRATED!**

The South Carolina network of PAIN THERAPY CENTERS™ offers you and your patient an alternative. Since establishing the first comprehensive pain and disability management program in the state in 1981, PAIN THERAPY CENTERS™ has an established record* of reducing pain intensity, restoring physical function, and returning patients to productivity and employment.

When you and your patient suffer the frustration of primary pain and disability, consider the South Carolina network of PAIN THERAPY CENTERS™. In association with leading hospitals, PAIN THERAPY CENTERS™ staff of physicians, physical therapists, medical psychologists, nurses, and occupational therapists provides comprehensive evaluation and treatment of primary pain disorders by physician referral.

PAIN THERAPY CENTERS™ of South Carolina — a state-wide network of hospital-based pain and disability restoration programs.



PAIN THERAPY CENTER™
of Greenville
Greenville Hospital System
Greenville, SC
242-8088

PAIN THERAPY CENTER™
of Columbia
Richland Memorial Hospital
Columbia, SC
799-8872



PAIN THERAPY CENTER™
of Florence
Bruce Hospital System
Florence, SC
661-3666

PAIN THERAPY CENTER™
of Charleston
Roper Hospital, Inc.
Charleston, SC
724-2857

* As published in Journal of Pain Management, Orthopaedic Review, Comprehensive Therapy, Southern Medical Journal

TRUSTEE REPORTS

TRUSTEE, FIRST MEDICAL DISTRICT (METROPOLITAN)

I am completing my fifth year on the Board of Trustees and my second year as Chairman of the Board. I have found my service on the board to be exciting, enjoyable, and educational on the one hand, and discouraging and frustrating on the other.

The good news is that the SCMA could hardly have been more successful during the past five years. Our Tort Reform effort led to a greater awareness of the problem, a successful bill by the Civil Justice Coalition, and a rather dramatic decrease in our malpractice premiums. The improvement in our malpractice premiums is probably related more to the efforts of our Risk Management Committee than anything else. Our efforts in the State Legislature have been quite successful, and our organization is now recognized as the leading voice in health matters. The SCMA has an excellent working relationship with the Board of Medical Examiners, DHEC, Health and Human Services Finance Commission (Medicaid), the PRO, and even with the folks at Medicare.

The bad news is that the climate for the practice of medicine is not as good as it was even five years ago. The advances in medicine are exciting and are occurring at an unparalleled rate, but we as practicing physicians are being inundated with "micro-management." We have an incredibly regulated profession, and everyone wants to, and is successful, in telling us what we must do. I think the problem starts in Washington, where Congress passes laws which its members usually haven't read, and sometimes haven't even written or discussed in public. HCFA writes regulations, which may or may not correspond to the intentions of Congress. The Medicare carriers and PROs have to implement the laws on short notice and with very little direction. The doctor has to comply or face a penalty of \$2000. The Office of Inspector General now says that it has evidence of false claims on 70 percent of practicing physicians. I doubt that information is going to be used for anything pleasant or

constructive.

Where do we go from here? Dr. Brake started Health Care 2000 in an effort to define our direction and make suggestions for improvement. Senators Leatherman and Saleeby started committees with similar goals. No one really knows where we will end up, but there is a growing consensus that there will be major changes in the health care delivery system in the next decade.

Should we toss in the towel and accept whatever fate the bureaucrats have for us? Of course not. We still have the greatest profession, and in this country we still can offer the best medical care to our patients. We must, however, be working in a doctor-patient relationship rather than in the provider-consumer relationship, which becomes more and more adversarial each year. As individual physicians we must practice the best medicine that we can, we must maintain our patients as allies not adversaries, and we must speak together as a unified profession in the nation. We can do that only by being active members of the SCMA and AMA.

We have a strong Board of Trustees and a dedicated staff at SCMA and we need your active participation in its many activities to be a more successful organization. I hope that you will consider ways to improve the SCMA and give your suggestions to the staff or members of the board.

Respectfully submitted,
J. Chris Hawk, III, M.D., Trustee,
First Medical District

TRUSTEE, SECOND MEDICAL DISTRICT (METROPOLITAN)

This past year has been interesting and relatively non-controversial. I testified before both House and Senate committees in reference to the Infectious Waste Bill. I have also participated in the DHEC discussions concerning regulations associated with this legislation. The

coalition of the SCMA, the SC Dental Association and the SC Hospital Association spent a great deal of time and effort in order to successfully impact the final form of this legislation.

This year completes my second as vice-chairman of the Board of Trustees of the SCMA, and I feel that Chris Hawk, our chairman, will make an excellent candidate for SCMA president-elect. I met with the Medical Student Section at the USC School of Medicine to promote participation in organized medicine. I attended the AMA Leadership Conference in Phoenix, Arizona. This thought-provoking meeting concentrated on a number of significant problems and stimulated discussions and thinking regarding possible solutions.

I feel that I conscientiously represented the concerns and feelings of the physicians in my district at the board level and, again, I tried to maintain attendance at all meetings. This past year I was selected as chairman of the Columbia Medical Society Legislative Committee and will attempt to, whenever possible, coordinate the activities of our committee with the legislative activities of the SCMA.

Lastly, I would again thank the members of my district for giving me the opportunity to serve and for providing the support required to meet the obligations and responsibilities of the position.

Respectfully submitted,
Edward W. Catalano, M.D., Trustee,
 Second District

FOURTH MEDICAL DISTRICT

At the Annual Meeting in April I will have completed six years as Trustee, Fourth District.

It is been difficult to attend the Anderson and Oconee Society meetings but I hope these societies' officers know that I have been available and have tried to represent our district with loyal attendance. I have participated in meetings of the Board, committee meetings, and the leadership conferences. The Doctor of the Day program has been fruitful in the legislature and I have served each year since the program was initiated.

During the last six years the SCMA has been

TRUSTEE, THIRD MEDICAL DISTRICT

First, I want to thank the South Carolina Medical Association for allowing me to serve a third term. This particular year has been rather peaceful compared with past times; however, the September 1989 retreat was disrupted by Hurricane Hugo and had to be cancelled. Up to the time of this report, I have attended all other meetings. The good news this year is that the malpractice insurance rates are being reduced. The bad news is that health care financing is becoming a bigger issue with the general public. Business is catching the brunt of the financial burden as federal revenues are curtailed for Medicare and Medicaid. Indigent care also cast a large burden on hospitals which are not being adequately reimbursed. Sooner or later something will have to give. The officers of the Association are continuing dialogue with representatives of business, the Legislature and other public bodies. Hopefully, some good will come out of this continuing debate.

I look forward to my final year of service as a trustee and, again, I appreciate the opportunity given me.

Respectfully submitted,
Richard M. Carter, M.D., Trustee,
 Third District

very active and productive in serving physicians of South Carolina, both members and non-members. Fortunately, our membership has grown but non-members are still getting a free ride. We should all influence our non-member colleagues to join both SCMA and AMA.

It has been an honor to have served as Trustee to the South Carolina Medical Association from the Fourth District.

Respectfully submitted,
W. J. Goudelock, M.D., Trustee,
 Fourth Medical District

TRUSTEE, FOURTH MEDICAL DISTRICT (METROPOLITAN)

It has been my privilege and pleasure to continue to serve as trustee from the Greenville area to the Board of the South Carolina Medical Association.

I am pleased to report that the SCMA continues to function effectively in South Carolina, representing its physician members, as well as the health interests of all the state's citizens.

Concentrated efforts continue to be made on the part of the SCMA and its staff to become proactive in protecting the health of the state's citizens and interests of its physician members. Recent legislation was successfully initiated concerning disposal of medical waste and accountability of insurance review organizations to the South Carolina Insurance Commission. As usual, efforts by health affiliate organizations to extend the practice of their professions into the physician/patient relationship, or to mandate insurance coverage, have been strenuously opposed with continued success on the part of the SCMA. SCMA President, Dr. Dan Brake, has directed his Health Care 200 Committee and their reported recommendations are forthcoming. The SCMA Auxiliary's project of the Health Education Van has been a great hit and the van has visited over 60 percent of the counties in the state.

The SCMA continues to offer attractive benefits to its members, including group medical insurance, disability insurance, continuing education opportunities, and an increasing public relations effort.

Our Columbia-based office continues to function effectively under the guidance of Bill Mahon and Barbara Whittaker. We have benefitted significantly from the addition of Mr. Stephen Williams, our in-house legal counsel. Our AMA delegation continues to be effective and influential on a national level. As the at-large member on the SCMA's Board of Trustees Executive Committee, I have been pleased with the overall smooth functioning of our organization.

On a local level, the Greenville Medical Society is on the verge of entering a new era by obtaining its own freestanding office building. A successful political breakfast was held with Representative Liz Patterson, with one scheduled with Senator Hollings. The Mediation Committee continues to function effectively, as does a newly established committee formed to deal with the problems of Medicaid patients.

Respectfully submitted,
James B. Page, M.D., Trustee,
Fourth District

FIFTH MEDICAL DISTRICT

I certainly enjoyed my first year on the Board of Trustees, having found it to be most enlightening and educational. Being the youngest member of the board, I have tried to learn by listening. I have attended all the board meetings along with the Leadership Conference in February. In June, I attended the Young Physicians' Section at the annual AMA meeting in Chicago and was pleased to report that we had an actively functioning Young Physicians' Section in South Carolina. I also attended the AMA interim meeting in December and served as the chairman of one of the two reference committees in the Young

Physicians' Section. I have enjoyed my tenure as South Carolina delegate to the AMA Young Physicians' section for the past 2½ years and feel that it has been invaluable by increasing my awareness of the issues that are affecting the younger physicians on a national level. During my term I also attended an organizational meeting headed by March Seabrook, M.D., for the reactivation of the Resident Physicians' Section.

Many of the issues affecting medicine on a national level are merely a reflection of our concerns in South Carolina. I enjoyed meeting with my constituent county medical societies

during the past year and look forward to more involvement with them over the remainder of my term. Having served on the Primary Care/Medicaid and Indigent Care Committee, I am proud to report that we have made significant improvement in Medicaid reimbursement over the last two years. I think this is directly related to the increased rapport between our Primary Care/Medicaid and Indigent Care Committee, SCMA leadership and the Health and Human Services Finance Commission. Dr. Ned Nicholson, the chairman of this committee, having grown weary of the battles, has turned the chairmanship over to me. I will try

to follow in his footsteps by increasing patients' access to care, which at the present time is inadequate, particularly in the metropolitan areas of our state. I also hope we can reduce the number of denied claims and further refine the filing processes for reimbursement.

I appreciate the physicians of Kershaw, Lancaster, Chester, Fairfield and York counties allowing me the honor of representing them on the Board of Trustees and look forward to the coming year.

Respectfully submitted,
Roger A. Gaddy, M.D., Trustee
Fifth District

TRUSTEE, SIXTH MEDICAL DISTRICT (METROPOLITAN)

I have again enjoyed serving on the Board of Trustees representing the Sixth Medical District. I have been able to attend all of the scheduled Board meetings. Our Board Retreat this year, unfortunately, was canceled by an unscheduled appearance of Mr. Hugo. However, we were able to complete all of our business with an extended Board meeting after the retreat had been scheduled.

Although I realize this is like preaching to the choir, I think all of us recognize the fact that at probably no time in the past has organized medicine been more important to the practice of medicine than it is now and will be in the future. Those of us who have been practicing during the past decade have seen innumerable changes which have impacted our practice of medicine a great deal. I really don't think the next ten years are going to be any different. Indeed, we may have more changes than we've had in the past. Organized medicine really offers us the only hope of maintaining some semblance of medical practice as we have had in the past. It is very important for each of us to participate as much as we possibly can in the workings of organized medicine, particularly

in our county medical societies, the SCMA and the AMA.

The next ten years I hope will be as rewarding, and I know will be as challenging as the past ten years. I feel like our organization is being very well managed by Bill Mahon, and I think that we should feel very fortunate that the SCMA has an Executive Vice President as capable and knowledgeable as Bill.

I have not been able to attend as many of my component county medical society meetings as I would have liked, due to the fact that I'm in solo pediatric practice and have a wife and three children. However, with the addition of an associate this July, I hope that will free me to visit the county medical societies more frequently. Again, I have enjoyed serving the physicians of the Sixth District for the past two years as their representative on the Board of Trustees. If I can be of any assistance to any of the members, please do not hesitate to contact me.

Respectfully submitted,
J. M. Lindsey, M.D., Trustee,
Sixth District

SIXTH MEDICAL DISTRICT

1989 was a busy year for the Board of Trustees of the SCMA. I was able to make every meeting.

In particular, I was impressed in the early part of the year with how well we worked with the legislators on our positive agenda and also in protecting the interests of our patients and members from unfriendly outside forces.

I believe over the last three to four years we have achieved an ever-better relationship with our legislators, both in Columbia and on the local level as individual physicians. We are becoming more conscientious and adept at dealing with local legislators.

I have enjoyed meeting with my component societies. As you might expect, much of the interest has been about Medicare issues.

All in all, I suppose we are now in a lull.

However, we cannot afford to be complacent. I believe the 1990's will be difficult as we face opportunities and challenges, particularly in the area of medical health care costs. What was once the realm of concern for bureaucratic and legislative idealists has now become of great concern to large and small businessmen alike.

For that reason, I believe that the recommendations of the Health Care 2000 Committee need to be given serious consideration. It is my own personal hope that this committee will continue to work in the years ahead; these issues are not one-time issues, but ones needing constant monitoring, vigilance and positive solutions.

Respectfully submitted,
Stephen A. Imbeau, M.D., Trustee,
 Sixth District

TRUSTEE, EIGHTH MEDICAL DISTRICT

Serving as your trustee for the past year has been a privilege. It has been rewarding and enlightening, but also disturbing.

The future of medicine depends on involvement by the physicians. I was pleased to see the determination and dedication of so many physicians in the SCMA. Only with a unified effort of all physicians in SC (and the US) can we hope to maintain medicine as the most respected profession.

It is difficult to understand why so many physicians do not belong to the SCMA or AMA but readily accept the fruits of labor of these dedicated physician organizations without even a second thought.

I realize that I alone bring very little to our organization. I believe, however, if all physicians in the Eighth District would join the SCMA and AMA, the impact would be far-reaching. If all SC physicians participated, we would be the role model of the nation. I ask all physicians to join and participate in shaping their own destiny—a destiny that must preserve and rejuvenate the practice of medicine.

The untiring efforts of our SCMA staff have been applauded in the past—but not nearly enough! Accolades to every member.

Thank you for allowing me this opportunity to contribute to our future. I hope my efforts have met your expectations and I look forward to continuing to serve you.

Respectfully submitted,
Dallas W. Lovelace, III, M.D., Trustee,
 Eighth District

THE UNITED STATES ARMY RESERVE HEALTH CARE PROFESSIONALS BONUS TEST PROGRAM

\$10,000 - \$20,000 - \$30,000

The **1989 National Defense Authorization Act** requires that the Department of Defense conduct a test to determine the effectiveness of a recruitment bonus to attract health care professionals to the Selective Reserve of the Army.

The Bonus Test Program is scheduled to begin on or about August 1, 1989 and will be offered to physicians in the following specialties:

**ANESTHESIOLOGY
ORTHOPAEDIC SURGERY
and
GENERAL SURGERY**
(Including selected subspecialties)

Applicants must be board certified or meet all requirements for board candidacy in one of the above specialties.

BONUS ELIGIBILITY: In addition to meeting all criteria for appointment as a medical corps officer in the US Army Reserve, Bonus Test applicants must be civilians and if prior service, discharged before 28 April 1989.

BONUS AMOUNTS: The test will offer \$10,000 bonus for each year of affiliation with the Selected Reserve of the Army, up to a maximum of 3 years. Physicians must choose 1, 2, or 3 years of affiliation at time of application. Bonuses will be paid annually at the beginning of each year of agreed affiliation.

TEST PARAMETERS: The design of the test stipulates that bonuses be offered in certain geographic areas. To qualify, applicants must reside within those areas at the time of accession.

**TO FULLY DETERMINE YOUR ELIGIBILITY FOR THIS PROGRAM
PLEASE CONTACT:**

**ARMY RESERVE HEALTH CARE TEAM
1835 ASSEMBLY STREET, RM 575, COLUMBIA, SC 29201-2430
OR CALL: (803) 765-5696 COLLECT**

COMMITTEE REPORTS

ADVISORY COMMITTEE TO THE SOUTH CAROLINA DEPARTMENT OF VOCATIONAL REHABILITATION

The South Carolina Medical Association Advisory Committee to the SC Department of Vocational Rehabilitation met on Tuesday, February 21, 1990 at the Sheraton in Columbia, South Carolina. Dr. Ben N. Miller, Chairman, presided. Members of the committee present were: Dr. Alec Brown, Columbia; Dr. Robert C. Lindemann, Rock Hill; Dr. Braxton B. Wannamaker, Charleston; and Dr. James E. Padgett, Jr., Columbia, representing the Department of Health and Environmental Control.

Vocational Rehabilitation was represented by Mr. Joe S. Dusenbury, Commissioner; Mr. Preston Coleman, Assistant Commissioner—Administrative Services; Mr. Walter J. House, Client Services Consultant; Dr. Paul G. Knight, Assistant Commissioner; Mr. Pete Howell, Assistant Commissioner; Mr. Charles LaRosa, Assistant Commissioner; Mr. Tony Langton, Project Supervisor; Mr. David Lever, Assistant Commissioner; Mr. Greg McGrew, Engineering Associate; Mr. Houston McMillian, Director, Staff Development and Training; Mr. Larry Trachtman, Technology Resources Coordinator; Mr. Richard Vandiver, Director, Disability Determination Division; Mr. Wayne Nance, Quality Assurance Analyst; Dr. Jim Weston, Physician, Disability Determination Division; and Mr. Tom Leahy, representing Social Security, Atlanta, Georgia.

Dr. Ben N. Miller welcomed the members of the Advisory Committee and stated that this committee serves as liaison between South Carolina Medical Association and the Rehabilitation Agency. Dr. Miller said that the committee had been a great source of help to the Rehabilitation Agency and he appreciated their continued interest and support of the handicapped population of the state.

Mr. Joe Dusenbury, Commissioner of South Carolina Vocational Rehabilitation, was introduced and stated that he thought the program would be of interest and would give new insight into some of the things Vocational Rehabilitation is trying to do in South Carolina.

The rehabilitation program has had some real changes in the past few years due to certain federal regulations. A number of people Vocational Rehabilitation has originally served had physical disabilities and are still being served by the agency to some extent. The department is being encouraged to do more in the area dealing with mental disabilities. Over half of the people now served by Vocational Rehabilitation are people that have handicaps other than physical disabilities as reasons for Vocational Rehabilitation working with them. Special effort in South Carolina has been made to extend and expand the services of rehabilitation. In conclusion, it was emphasized that more and more interest is being placed on adaptive devices and rehabilitation engineering for the handicapped.

Dr. Miller asked that the committee accept this as a report from the rehabilitation agency and that a rebuttal and discussion period would be offered later in the meeting.

Mr. Tony Langton, Project Supervisor, stated that the purpose of the program was to develop assistive technology with a broad range of persons which is much broader than the typical rehabilitation program. He stated that funding was a very vital part of how services are provided in the state. There is much to be done in obtaining and improving the necessary funding for assistive technology. The program is involved in developing material and providing training and technical assistance. The program is not designed as a service provider but as a mechanism by which to work along with the Vocational Rehabilitation Department and other agencies providing services to individuals.

Mr. Larry Trachtman, Technology Resources Coordinator, was introduced and stated that the main function was to serve as a network for statewide technology services with regional service areas in the Piedmont, Midlands, Pee Dee and the Low Country. The program will also serve as user assistance centers and community resource contracts throughout

the state for various organizations and disabled individuals.

Mr. Greg McGrew, Engineering Associate, was introduced and stated that he worked with Vocational Rehabilitation clients only to provide rehab engineering technology services in three areas: job accommodation, home accessibility and adaptive seating. He demonstrated the adaptive seating to the committee and stated that he would be happy to answer any questions after the meeting.

Mr. Richard Vandiver, Director, Disability Determination Division, was introduced and stated that when the disability program began in the mid 1950s, the definition used for determining disability was that a person had to be unable to engage in any substantial gainful activity. Congress has expressed an expectation that the physician in the community be heavily involved in the disability evaluation process. First, the individual's treating source should be contacted to find out how he or she viewed the person's condition and how impaired functionally and mentally the individual was. Second, when there was not enough evidence from the treating source then examination had to be purchased. Since then there have been many changes in the program. Legislation has made it clear that Congress expects the Disability Determination Division to involve the treating sources in the process of making the disability determination decisions.

Mr. Vandiver expressed his appreciation to the medical community for their assistance in working with the department and help in making the decisions for disability claims and indicated that their continued support was needed.

At this point Dr. Miller asked each member to introduce themselves and give their thoughts on the meeting thus far. Dr. Robert Lindemann indicated that in the discussion of assistive devices there was no mention of assistance for the diabetic patient. He wanted to know if there were provisions for the diabetic patient to have devices such as the various types of pumps or other type devices for individuals who may not have the resources to provide the needed equipment. He stated that there was discrimination against the diabetic in the workplace and wanted to know if there was some way of helping the patient control the diabetes and making him more functional, as diabetes can lead to many disabling conditions such as blindness and amputations. Several minor concerns were expressed and these were answered or taken under advisement for future consideration.

At this point the meeting was adjourned for dinner with continued comments and questions. There being no further discussion or business, the meeting was adjourned.

Respectfully submitted,
Ben N. Miller, M.D., Chairman

CONSTITUTION AND BYLAWS COMMITTEE

The Constitution and Bylaws Committee recommends to the House of Delegates that the following amendments to the Bylaws be considered for adoption.

Due to the implementation of the Health Care Quality Improvement Act (PL 99-660) the committee recommends that the following changes be approved:

1.60 DISCIPLINE OF MEMBERS: The Board of Trustees, after due notice and hearing, and upon an affirmative vote of three fourths (3/4) of its voting membership, may censure, suspend, or expel a member from Association membership for an infraction of the Constitution and Bylaws and/or for a

violation of the Principles of Medical Ethics. In addition to the disciplinary action set forth in the Bylaws, members may be subject to the following disciplinary actions:

- A. Actions under the Constitution and Bylaws of the component society to which the member belongs;
- B. A request from the component society to which a member belongs for the Association to take disciplinary action;
- C. A request by the Association to the component society to which the member belongs to consent to the disciplinary proceedings by the Association.

1.61 **PROCEDURE.** The disciplinary action against a member may be initiated by written petition of any member of the Association or one of its component societies signed and delivered to the Chairman of the Board of Trustees; or in the Chairman's absence, to the Vice Chairman, explaining the reasons for discipline. Once the Chairman of the Board of Trustees has received the necessary petition, the Chairman must then refer the entire matter to the Mediation Committee to fully investigate grounds for discipline and, in turn, make a recommendation to the Chairman of the Board to carry through with one of the following actions:

- A. Dismiss the allegation brought forth;
- B. Begin actual proceedings for the hearing on disciplinary action involving the member in question.

1.62 **DUE PROCESS.** Throughout the entire removal proceedings, the subject must receive the following:

- A. A reasonable notice of the charges against the physician;
- B. A fair notice of the hearing upon them;
- C. A fair opportunity to hear the evidence and confront and cross examine witnesses against him/her;
- D. A fair opportunity to refute the charges; and
- E. A fair hearing before the members of the Board of Trustees.

1.621 **CHAIRMAN.** The Chairman shall not take part in any vote regarding the discipline of a member.

1.63 **APPEALS.** All disciplinary actions by a component society against a member may be appealed to the Board of Trustees of the Association on questions of law and procedure only, but not on questions of fact.

1.60 **DISCIPLINE OF MEMBERS.** Any complaint which may involve possible disciplinary action shall immediately be forwarded to the Executive Committee for action. Grounds for such disciplinary action shall be a violation of the

Constitution and Bylaws and/or a violation of the Principles of Medical Ethics of the SCMA.

1.61 **PROCEDURE; DUE PROCESS.** Upon receipt of the complaint, the Executive Committee shall appoint a hearing panel, composed of five physicians not in economic competition with the respondent physician(s), who shall hear the complaint. As soon as practicable, a hearing date will be established and all parties concerned will be given, in writing, at least 30 days notice of the date of the hearing. The Notice of the hearing shall clearly set forth the grounds of the complaint and the specific violation which may have occurred, including a statement identifying the nature of the violation and the facts which support the finding of an apparent violation. The Notice should also clearly identify the following rights of the respondent physician(s): a) the right to be represented by an attorney or any other person of the physician's choice; b) the right to present evidence the hearing panel decides is relevant, without regard to the rules of evidence; c) the right to call and examine his own witnesses and the right to cross-examine adverse witnesses; d) the right to submit a written statement at the close of the hearing; e) the right to have a record made of the proceedings; f) the right to obtain a copy of the transcript of the proceedings upon payment in advance of a reasonable sum for preparation of the transcript. The hearing panel shall have the same rights as the respondent physician(s). At the hearing, the panel will first consider the evidence showing why disciplinary action may be needed. Following this presentation, the respondent shall have an opportunity to put forth rebuttal evidence. Each party will have the right to cross-examine witnesses produced by the other. At the conclusion of the presentation of evidence, both parties will have the right to present a final statement with regard to their

position.

After all evidence has been received and final summations heard, the hearing panel shall determine if disciplinary action is appropriate. If such action is not appropriate, all parties, including the Executive Committee, will be promptly notified in writing of the panel's decision.

If disciplinary action is deemed appropriate, the panel, by a unanimous vote, shall determine the appropriate action to be taken regarding the respondent. The hearing panel shall have the authority to suspend, or expel any member from the Association subject to appeal pursuant to 1.62.

All parties, including the Executive Committee, shall be promptly notified of the panel's decision.

- 1.62 **APPEALS.** *Any decision made by a special hearing panel appointed by the Executive Committee involving disciplinary action may be appealed directly to the Board of Trustees for review. The party desiring to appeal must send written notice to the Board of Trustees of this intention to appeal within 30 days of receipt of the hearing panel's decision.*

On appeal, The Board of Trustees shall review the record of the evidence presented to the hearing panel to determine if the decision of the panel is supported by substantial evidence. The Board of Trustees shall also review the appropriateness of the panel's action imposed. The Board shall have the power to approve the decision of the hearing panel or modify the decision of the hearing panel in any manner the Board deems justified in the interests of the Constitution, Bylaws, or Principles of Ethics adopted by the SCMA. Such approval or modification shall require a vote of a majority of the members of the Board of Trustees who are qualified to vote under the Constitution and Bylaws of the SCMA.

The Board of Trustees shall promptly notify, in writing, all parties of its decision with reference to the appeal, and

shall clearly set forth the facts from the record which support its position.

- 1.63 **CONFLICTS OF INTEREST.** *Any member of any panel established under these guidelines who has any conflict of interest with a party involved in the matter before him, or, who for any reason feels he cannot be an impartial participant in the proceedings, should immediately withdraw from the panel by notifying the chairman of the panel of his desire to not participate. Specific reasons establishing the conflict of interest need not be revealed.*

The committee also recommends that the word Housestaff be replaced by the word Resident throughout the Constitution and Bylaws.

The committee recommends that the reference to the Committee on Alcohol, Drug Abuse and Impaired Physicians in Section 3.951 be changed to Physicians' Advocacy and Assistance Committee.

The committee reviewed Bylaws proposed by the Resident Physician's Section of the SCMA for governing the activities of the Section. We submit the following for your approval:

- 1.00 **RESIDENT PHYSICIANS SECTION.** There shall be a special section for resident physicians.
- 1.01 The purpose of this Section shall be:
- A. To promote and maintain the Principles of Medical Ethics;
 - B. To provide a forum within organized medicine for the exchange of information among resident physicians in South Carolina and to represent the best interests of resident physicians within the South Carolina Medical Association (hereinafter referred to as "SCMA") through active participation in their proceedings;
 - C. To promote the art and science of medicine; and
 - D. To preserve and promote the public health.
- 1.02 **MEMBERSHIP**
QUALIFICATIONS OF MEMBER-SHIP. Any licensed physician in training in an accredited post-graduate

training program in South Carolina shall be eligible to join the Section as an active member.

1.021 *CATEGORIES*

A. *Active Membership.* An active member shall be any resident physician who meets the qualifications for membership and who has paid dues for the current year.

B. *Affiliate Membership.* An affiliate membership may be extended to any licensed physician in training in an approved post-graduate training program outside of South Carolina and who has paid dues for the current year. An Affiliate Member may attend and speak at any meeting of the Section. The right to hold any office or vote is denied to Affiliate Members.

1.03 *DUES AND ASSESSMENTS*

The annual dues for active membership in the Section shall be determined by the Board of Trustees of the SCMA and paid to the Treasurer of the SCMA at the time of application for membership.

1.04 *GOVERNING COUNCIL.* There shall be a Governing Council of the Resident physicians to direct the programs and activities of the Section.

1.041 *MEMBERS.* There shall be nine (9) voting members of the Governing council consisting of the Chairman, Chairman-Elect, Secretary-Treasurer, two (2) SCMA/AMA Delegates, two (2) SCMA/AMA Alternate Delegates, and two (2) At Large members. Governing Council members shall be elected by majority from the floor of the annual meeting.

1.042 *APPORTIONMENT.* The Governing Council would ideally consist of one Association member from each of the post-graduate institutions. Not more than three (3) should come from any single institution.

1.043 *OFFICERS.* The officers of the Sec-

tion will have the following duties and responsibilities.

1.0431 *Chairman:* The Chairman will preside at the business meetings and meetings of the Governing Council.

1.0432 *Chairman-Elect:* The Chairman-Elect shall assist the Chairman and preside in the absence of the Chairman.

1.0433 *Secretary-Treasurer:* The Secretary-Treasurer shall maintain such records as may be necessary or advisable for the conduct of the activities of this Section.

1.0434 *Two Delegates and Alternate Delegates to the SCMA/AMA Resident Physicians Section:* The SCMA/AMA Delegates and Alternate Delegates shall represent the members of the Section in the AMA Resident Physicians Section. The Delegates and Alternate Delegates shall also represent the Resident Physicians Section in the House of Delegates of the SCMA. The Delegates/Alternate delegates must be members of both the AMA and SCMA.

1.0435 *Two (2) At Large Members:* The Members At Large will participate in all deliberations of the Governing Council and will perform other duties as directed by the Governing Council.

1.044 *Terms.* Governing Council members, including Delegates and Alternate Delegates, shall serve a term of one year beginning at the conclusion of the annual meeting at which they are elected and ending at the conclusion of the next annual meeting. Tenure for each office shall not exceed two (2) consecutive terms.

1.045 *Vacancies.* Any vacancy occurring on the Governing Council will be filled at the next business meeting of the Section.

- 1.046 *Meetings.* The Governing Council shall meet at least once yearly under the direction of the Chairman. A quorum for the meeting shall be a majority of the members of the Governing Council.
- 1.05 *SECTION MEETINGS.* There shall be an annual Section Meeting of the members of the Section held at the call of the Chairman.
- 1.051 *Voting Membership.* The voting membership shall consist of all resident physician members of the SCMA who qualify for membership in the Section.
- 1.052 *Purpose.* The purpose of the business meetings of the Section shall be:
- (a) to hear such reports as may be appropriate;
 - (b) to consider and vote upon such matters as may properly come before the meeting;
 - (c) to elect, at the annual business meeting, the members of the Governing Council; and
 - (d) to conduct such other business as may properly come before the meeting.
- 1.053 *Quorum.* One-tenth of the voting members must be present at any meeting to constitute a quorum.
- 1.054 *Reference Committee.* The Governing Council, at its discretion shall have the authority to form reference committees to receive testimony on business before the meeting, to report to the floor on the content of the testimony and to introduce recommendations to the floor of the Section Meeting.
- 1.055 *Rules of Order.* The rules of order for conduct of business shall be the rules of order of the House of Delegates of the SCMA.
- 1.0551 *Voting and Voice.* Any member of the Section may attend, introduce resolutions or reports, debate issues, and vote in the business meeting of the Section. Any member of the SCMA may be permitted voice in the Section at the discretion of the Chairman.
- 1.0552 *Notice.* Notice of the meeting to be held shall be provided to the membership of the Section at least thirty (30) days prior to the meeting.
- 1.056 *FINANCIAL RESPONSIBILITY.* Funding of the Resident Physicians Section will be based on the number of SCMA resident physician members at the end of each membership year. The SCMA will provide \$10 per member per year.
- 1.057 *AMENDMENTS.* Amendments to the Bylaws must be submitted to the SCMA Board of Trustees for approval prior to final adoption by the Section.

Respectfully submitted,
William H. Hester, M.D., Chairman

THE CONTINUING MEDICAL EDUCATION COMMITTEE

What follows is the Annual Report of the Continuing Medical Education Committee. In the last year the CME Committee has been very busy fulfilling its responsibilities. We have placed great emphasis on attempting to maintain the high standards set under the very able leadership of Dr. O'Neill Barrett. We have some new members on the committee, and I wish to say that none of our accomplishments could have been achieved without the hard work and participation of all of the committee members.

One of the principal responsibilities of the CME Committee is to provide for the CME Program at the Annual Meeting in Charleston. To that goal, the committee worked long and hard at debating and selecting choices for topics and speakers. It should be noted that we are very pleased with the offerings for the 1990 meeting as we believe these sessions will provide many excellent learning opportunities for all attendees. The House of Delegates should note with gratitude the hard work, preparation and dedication put in by Joy Drennen to coordinate this meeting. Much of the success rests on her competent work.

In the fall the committee was represented at the October meeting of the Accreditation Council for Continuing Medical Education which was held in Chicago. As you know, the SCMA is now fully accredited and is in the middle of the three-year period for certifying intrastate sponsors of CME in South Carolina. At this meeting there was a significant amount of discussion concerning other state boards of medical examiners requiring CME for continued licensure. Apparently some 22 states now require CME. As yet this does not affect us in South Carolina.

Cooperation of the staff and the committee members has made chairing this committee a very easy task and to all of those individuals I owe much gratitude and look for their continued support.

Respectfully submitted,
Gerard C. Jebaily, M.D., Chairman

THE LEGISLATIVE ACTIVITIES COMMITTEE

Mr. Speaker, members of the House of Delegates, SCMA members and guests, it is my privilege to report to you on the activities of the Legislative Activities Committee this past year.

The committee's primary function is to review proposed legislation and recommend a position to the Board of Trustees of the Association. Prior to the opening of the current legislative session, the committee met and considered legislation to be introduced by the SCMA as well as issues expected to be introduced by others. The committee met in August and November of 1989.

The committee recommended the following legislation to be introduced: 1) to require DHEC to regulate tanning bed facilities; 2) to continue to lobby for the passing of the Utilization Review Bill; 3) a bill to repeal certification of x-ray technicians; 4) a bill to make sample prescriptions exempt from the labeling law; and 5) a bill to make copying charges for medical records uniform (workers' compensation=auto insurance bill), \$10.00 minimum or \$.50 per page.

The committee discussed various legislative efforts expected by others. The committee recommended opposing bills in the following areas: 1) independent practice of physical therapists; 2) mandated insurance benefits for chiropractors; 3) licensing of dietitians/nutritionists; 4) retention of graduates of S. C. medical schools to South Carolina for a five-year period (or repay state medical school costs).

The SCMA Doctor of the Day program continues to be a valuable service to the Legislature and to SCMA. The committee is grateful to those of you who donate your time to serve.

On behalf of committee members and myself, I would like to thank you for the opportunity to serve on this very important committee.

Respectfully submitted,
James R. Pruitt, M.D., Chairman

THE MATERNAL, INFANT AND CHILD HEALTH COMMITTEE

Significant attention has been given to the high rate of infant mortality in our state during the past year. The SCMA was involved in the Governor's "Caring for Tomorrow's Children" program, which will encourage pregnant women to seek early and continuous prenatal care and care of their infants under age one.

The SCMA also provided input into DHEC's OB, Pediatric and Family Practice task forces, which were convened by Commissioner Mike Jarrett in order to obtain input from physicians regarding maternal, infant and child health issues.

Coordinated efforts are proceeding to improve the Medicaid program. These efforts are shortening the amount of time needed for a patient to obtain Medicaid eligibility; improving the transportation and case management system, which should improve Medicaid patients' appointment-keeping rates; physician reimbursement, audits, and claims processing have also been greatly improved.

Medicaid is still not perfect and we encourage physicians to inform our committee, Barbara Whittaker of the SCMA staff, and/or your program manager at the Finance Commission of any problems you encounter. Please let us know before something becomes critical to you—we can help!

Our committee has been fortunate to have Bill Sappenfield, M.D., an epidemiologist on loan to DHEC from the CDC, visit with us each meeting to discuss trends in infant mortality. The rate of women receiving an adequate number of prenatal visits is still much lower for South Carolina than the U. S. rate.

On a positive note, no maternal deaths necessitated our review. We are cooperating with DHEC to implement fetal and infant death review through our local county medical societies. This should further identify social and other problems which continue to contribute to our state's high infant mortality rate.

In order to be more responsive to our fellow practicing physicians, we have included a new agenda item each meeting where we ask the

family practice, OB and pediatric representative of each geographic area to report on input he/she has received from local physicians. We encourage you to contact your local representative with suggestions for our committee.

As a result of one suggestion, our committee met with a representative of the S. C. Alcohol and Drug Commission and the Department of Social Services in order to learn what resources are available and what actions are required when we identify mothers who are cocaine abusers. This information will be published in the newsletter section of *The Journal of the South Carolina Medical Association* after it is finalized by the Department of Social Services.

Respectfully submitted,
Alexander R. Smythe, II, M.D.,
 Co-Chairman
B. C. Pendarvis, Jr., M.D.,
 Co-Chairman

THE MEDIATION COMMITTEE

The Mediation Committee of the SCMA met in November to review the pending complaints filed with the committee.

Twenty-two complaints came to the Mediation Committee from April 1989 to April 1990. Of this number, two were non-members of the SCMA; (The committee has no jurisdiction in these cases, but urged the physicians to join SCMA. If they join or consent to the review, the committee proceeds with the case); two are pending at the local level; and seven were resolved by local grievance committees. The remainder were resolved by the Mediation Committee.

The committee complements the very efficient and active grievance committees of the component medical societies who capably handle complaints within their jurisdiction.

I wish to thank the committee members and SCMA staff for their support this past year.

Respectfully submitted,
Albert G. LeRoy, Jr., M.D., Chairman

MEDICAL ASPECTS OF SPORTS COMMITTEE

During the 1989-90 year, the committee on the Medical Aspects of Sports held meetings as well as its annual seminar during the state association meeting. At the meeting of April 28, 1989, attendance reached an all time high, and active participation was provided by members of the SCMA from throughout the state. Our guest speakers at that meeting were Pete Ayoub, Director of the South Carolina High School League; J. D. Simpson, Athletic Director of the Charleston County Schools; and Joe Kenny, President of the Athletic Trainers Association of South Carolina. The purpose of this meeting was to discuss the requirements for participation in athletics in South Carolina high schools in regard to participation exams and health questionnaires. At this same time, input was received from Pete Ayoub which indicated that upon acceptance this would be instituted as a statewide requirement for participation in athletics. Each athletic training program was discussed. The Charleston experience was related by Dr. Reed and by Mr. J. D. Simpson. Input was received from Joe Kenny in regards to the requirements for certification of an athletic trainer and how this could coincide with a teacher athletic training program.

A report was given on the meeting held with the North Carolina Committee on Sports Medicine during the weekend of July 4, 1988. This was considered a meeting of the committee and encouragement for participation was made. Thad Bell, M.D., gave a brief discussion of the Governor's Office plans to reinstate the Governor's Council on Physical Fitness and, though he sought no endorsement at this time, this was to be considered at a future date.

The Annual Meeting had as its guest, Dr. John Bergfield of the Cleveland Clinic, who presented a symposium on the afternoon of April 28, 1989, which was directed at primary care physicians with discussion of common injuries and the examination and evaluation of the knee. A separate reception was held for Dr. Bergfield and members of the state association, as well as local orthopedists.

The next meeting was held in conjunction with the North Carolina Sports Medicine

Committee during the July 4, 1989 weekend. Dr. Sam Seastrunk and Dr. Frederick Reed attended. The seminar provided a resource for future planning, and several issues common to the two states were discussed in regards to such activities as helmet laws, drug screening and proper certification of trainers.

The last meeting held in 1989 was November 1. This was a planning session held at the association office and attendance once again was excellent. At this time, Ray Geddings, who is the Accreditation Supervisor of the Office of School District Accreditation and Assessment of the State Department of Education, was present to discuss the relationship which his office would like to establish with the state medical association in regards to planning and implementing programs for high school athletes. His support was warmly received. Plans are made to continue an ongoing relationship much as is done in the North Carolina Department of Public Instruction through Mr. Robbie Lester. Robbie Lester has offered to act as a consultant to the Sports Medicine Committee. The teacher/athletic trainer program was discussed again. Topics for the upcoming meeting were discussed. The plan was for a broad program which would be directed by Dick Ward and consist of an "Update on Risk Management in Sports," by Attorney Robert Hood; "Preparticipation Exam Summary," by Robert Belding, M.D.; "Problems Seen in Collegiate Freshman Athletics Often Missed or Mistreated," by Melissa Martin; "Teacher Athletic Trainers," by Frederick Reed, M.D.; and "Equipment for the Sports Trainer," by Dick Ward, M.D. This program will be presented on April 27. The discussion was given by Melissa Martin during the November 1 meeting which led the committee to recognize the problems associated with examinations carried out apart from an organized screening program. Their concern has been that without organization, many potential problems for athletic participation have been missed. This will be the theme of her discussion at the April 27 meeting.

The committee unanimously supported its previous resolution for preparticipation exam-

inations. There was no dissent as to the format. This should be on a yearly basis. However, consideration of a single examination can be made in the future after the program is instituted. It was felt, however, that to initiate this program with a single exam would be destructive to the intent; therefore, the resolution was returned unchanged with the exception of wording making it clear that there had been previous preparticipation exams, but there had not been previous preparticipation history questionnaires. The next meeting to be held will be in conjunction with the state association meeting.

Respectfully submitted,
Frederick E. Reed, M.D., Chairman

THE MEDICAL ETHICS COMMITTEE

The Medical Ethics Committee of the SCMA continues to be quite active, meeting nearly every month. The committee continues to enjoy the assistance of the following non-physician medical ethicists: Nora Bell, Ph.D., Albert Keller, Ph.D., Stuart Sprague, Ph.D., and Douglas MacDonald, Ph.D.

At this year's Annual Meeting, the Medical Ethics Committee and SCIMER have arranged for Julia Connelley, M.D., to be the Leonard Douglas Memorial speaker and a workshop leader.

The "Principles of Medical Ethics of the South Carolina Medical Association," adopted by the House of Delegates in 1988, continue to be applied by the committee in defining ethical issues referred to the committee. This year, the committee has considered the ethics of *ex parte* communications in civil lawsuits, the ethics of experimental use of non-experimental drugs and the ethics of the physician as a expert witness. In addition, the committee has begun a discussion of the ethics of organ and tissue donation. Committee member Robert M. Sade, M.D., has authored an article concerning the SCMA's "Principles of Medical Ethics" which was printed in the March issue of *The Journal*.

In the area of ethics education, members of the committee participated in the annual

Trustees, Administrators, and Physicians (TAP) Conference at Hilton Head Island and the annual SCMA Leadership Conference held in Columbia.

The committee continues to monitor the most recent opinions from the AMA's Council on Ethical and Judicial Affairs, as well as articles regarding medical ethics produced by such entities as the Hastings Institute.

The committee continues to welcome suggestions from the SCMA membership regarding other topics for the committee's study.

Respectfully submitted,
John M. Roberts, M.D., Chairman

THE MEMORIAL COMMITTEE

Each year at this time we pause in our meeting to pay honor and tribute to our fellow physicians who have completed their journey in this world and now rest from their labors.

These practitioners of medicine served their fellow man with distinction. They enjoyed honor and respect in their communities.

By combining hard work, good humor and compassion, they ministered well to the bodies, minds and spirits of those who trusted their well-being to them. By their commitment to high ethical standards, they upheld the integrity of our profession and represented their fellow physicians well before the world.

Through their dedication to the healing arts and their love of people, these noble men and women have left this world a better place in which to live.

After their names have been read we will stand for a moment of silence: M. Rodney Culler, M.D., Orangeburg; Alexis B. Calder, M.D., Sumter; Joseph H. King, M.D., Manning; William B. Ardrey, III, M.D., Rock Hill; William H. Prioleau, Sr., M.D., Charleston; Frederick F. Adams, Jr., M.D., Spartanburg; Sally B. McCants, M.D., Columbia; Gerald W. Scurry, M.D., Columbia; Thomas E. Jenkins, Sr., M.D., Laurens; G. D. Stowe, M.D., Spartanburg; John M. Fewell, M.D., Greenville; John C. Buchanan, Jr., M.D., Winnsboro; James B. Pressly, M.D., Greenville; James N. Holtzclaw, M.D., Greenville; John S. Floyd, III, M.D., Newberry; William T. Bonner, M.D., Spartanburg; William W. Simmons,

M.D., Greenville; James H. Suhrer, Sr., M.D., Aiken; Finley A. Kennedy, M.D., Aiken; Arthur S. Woodward, M.D., Myrtle Beach; Frank R. Wrenn, M.D., Greenville; Kirby D. Shealy, Sr., M.D., Columbia; Richard B. Maxwell, Jr., M.D., Johns Island; and Montague Brantley, Sr., M.D., Sumter.

Respectfully submitted,
W. Rion Dixon, M.D., Chairman

THE OCCUPATIONAL MEDICINE COMMITTEE

The SCMA Committee on Occupational Medicine held quarterly meetings during 1989. *The Schedule of Fees for Physicians and Surgeons for Services Rendered under the South Carolina Workers' Compensation Law* was revised and reprinting is expected to be completed in the spring of 1990. Many hours were contributed to this effort by all members of the committee.

Physicians' fees which seemed inappropriate to the Medical Department of the Industrial Commission were reviewed at each meeting, and recommendations were made to the commission on an individual case basis.

The committee hosted a dinner meeting with the commission during the year. As usual, this meeting prompted very frank and very productive discussions of our mutual problems and concerns relating to providing the best possible medical care for South Carolina's injured workers at the lowest possible cost. The commission requested we add a psychiatrist and an infectious disease physician to our committee. This request stems from the fact that the SCWCC is now seeing stress related workers' compensation cases. They also would like help from our committee should a claim be presented from an AIDS related work injury.

Another concern of the commissioners are physicians who do not accept workers' compensation cases. I would like to urge all South Carolina physicians to treat injured workers.

Mr. Mike LeFever, Executive Director of the South Carolina Workers' Compensation Commission, and I are presently working on an article to be printed in *The Journal of the South Carolina Medical Association*. Our article will

relay to the physicians of South Carolina some of the problems encountered by the commission and physicians who treat injured workers.

We are also discussing ideas for a panel discussion between the South Carolina Workers' Compensation Commission commissioners and physicians during the 1991 SCMA Annual Meeting.

The South Carolina Workers' Compensation Commission, in conjunction with the SCMA, will hold the 11th Annual Medical Seminar. This will be held May 4-6, 1990, at the Myrtle Beach Hilton. I urge all physicians to attend this important meeting.

In summary, 1989 was another busy year for the committee in fulfilling its role as liaison between the South Carolina Medical Association and the South Carolina Workers' Compensation Commission, as well as a resource group to the commission as it attempts to fairly administer the Workers' Compensation Law of the State of South Carolina.

I would like to thank all committee members, SCMA staff and SCWCC staff for their hard work this past year.

Respectfully submitted,
Marion F. McFarland, III, M.D., Chairman

THE PEER REVIEW COMMITTEE

The SCMA's Peer Review Committee is responsible for: (1) quality review; (2) physician adviser monitoring; (3) insurance peer review; and (4) criteria development review and revision.

Because the SCMA's subsidiary corporation, the South Carolina Medical Care Foundation, has performed all insurance peer review during the last few years, the SCMA's Peer Review Committee has evolved into a quality review committee which is available on an as-needed basis.

During the last year our committee assisted two SCMA members who requested that we review an aspect of their practice which had been questioned by their hospital's executive committee. Representatives of our committee reviewed several of the physicians' medical records, obtained input from the SCMA's Medical Ethics Committee, and then issued our review determinations to the physicians.

The assistance of Dr. Angus Baker in our review was greatly appreciated. Our committee stands ready to provide this type of review for other SCMA members.

Respectfully submitted,
Charles Sasser, M.D., Chairman

THE PHYSICIANS' ADVOCACY AND ASSISTANCE COMMITTEE

The committee has been quite active this past year. There have been a number of contracts with physicians with impaired function and a number of interventions by committee members resulting in treatment and contractual arrangements with impaired physicians. A significant number of physicians who have been under contract and monitored by the committee have completed their term of supervision and have had their contracts closed by the committee. Some of the physicians who have completed their contracts have become active members of the Physicians' Advocacy and Assistance Committee. The committee has also been instrumental in influencing some of the physicians with whom we have been working to become members of the SCMA.

The chairman met with the Board of Trustees at their January 20, 1990 meeting for the purpose of informing the board of the activities of the committee. The board once again approved a budget for the committee.

The committee now uses two new lab professionals. Both are doing an outstanding job.

The regional treatment teams continue to be very active and continue to work with their peers as advocates. There are active Caduceus Club physician groups in Charleston, Greenville-Spartanburg, Florence and the Columbia areas.

The chairman and the committee were instrumental in the Members' Insurance Trust providing coverage for outpatient substance abuse rehabilitation treatment. The chairman met with the MIT Board and requested that the same guidelines developed by the PAAC for inpatient substance abuse treatment be used for outpatient treatment. PAAC chairman and committee members believe the new outpatient benefits could be a cost saving measure

for the MIT. The chairman also requested that any physician receiving treatment for substance abuse be sent a letter from the MIT offering the help of the PAAC.

With help from the SCMA legal staff, the committee has instituted a new Aftercare Contract. The terms of the contract have been increased from 24 to 60 months or the duration of any State Board of Medical Examiners' order. Each treatment team is now in the process of having members sign new contracts.

During the past year, chairman and committee members have met with auxiliary groups and others to speak on the "Impaired Physician."

The committee is very proud of the special issue of *The Journal*, January 1990, on Alcoholism and Other Drug Abuse—The South Carolina Story. Special thanks go to committee members Greg Phelps, M.D., and N. Peter Johnson, Ph.D., who were guest editors and who dedicated many hours to this project. Thanks also go to all committee members and others who contributed by writing articles and to those institutions whose contributions permitted publication of this special issue.

The committee lost two faithful members this year, Fred Adams, Jr., M.D., and John S. Floyd, III, M.D. Our sympathy goes out to their families.

I wish to thank the Board of Trustees, the committee members and the SCMA staff for their support and work this past year.

Respectfully submitted,
Hugh V. Coleman, M.D., Chairman

THE PRIMARY CARE/MEDICAID AND INDIGENT CARE COMMITTEE

The Health and Human Services Finance Commission has continued to improve the administration of the Medicaid program. Reimbursement rates are much better than ever before and claims processing appears to be much quicker and less burdensome. A review of rejected claims by the Finance Commission found that most errors were a lack of patient Medicaid number and, secondly, an incorrect provider number. This should remind all of us

of the need to train and supervise our own office personnel.

Our committee has met three times since the 1989 Annual Meeting. In each month's newsletter section of *The Journal of the South Carolina Medical Association*, we have provided timely hints and pertinent information about Medicaid, including explanations of new reimbursement rates and reimbursement codes of which most physicians are unaware (such as reimbursement for responding to telephone calls from home health nurses).

Our committee has been educated about Health Manpower Shortage areas and learned that staff at the Finance Commission can assist physicians in obtaining a redesignation of their areas. It is important to notify the Finance Commission of a reduction of physicians in your area so an updated designation can be obtained; areas classified as HMSA 1 and 2 receive a 5% Medicare reimbursement supplement.

At the request of the SCMA's Executive Committee, our committee developed a proposal to attempt to increase the number of physicians treating Medicaid patients. Our goal is to have each county medical society implement a method to assure that all physicians see their fair share of Medicaid patients.

Although our committee is pleased with the improvement in the South Carolina Medicaid program, we have continued in our watchdog role and have notified the Finance Commission, DSS, and the State Legislature through their mandated Medicaid eligibility study of our concerns with Medicaid Third Party Liability (TPL), audits, and eligibility. Progress has been made in each area. Of special note is the fact that Medicaid audits are no longer generated as a result of a large number of claims, but rather in response to practice parameters established by specialty.

Respectfully submitted,
Benjamin E. Nicholson, M.D.,
 Chairman

REPORT OF THE SCMA AD HOC TASK FORCE ON AIDS

The SCMA AIDS Task Force at its inception was called to meet on an as needed basis and to serve in an advisory capacity to SCMA or outside groups. The committee felt its work thus far this year could be handled without holding a meeting and conducted its business in this manner. Members have been kept up-to-date via mailings from the SCMA and through the "SCMA Newsletter."

Members of the task force as well as SCMA staff continue in their liaison activities with state agencies, such as the Department of Health and Environmental Control, Health and Human Services Finance Commission, Department of Social Services, and Department of Corrections. Continuous interaction is maintained with other organizations such as church groups, the USC School of Public Health, local health agencies, etc.

For the fourth consecutive year, the SCMA is offering a workshop on AIDS at its Annual Meeting, entitled "AIDS/OSHA and The Office Practice."

Moreover, all county medical societies were offered by the SCMA to have a speaker address the AIDS related topic(s) of their choice at one of their meetings.

The task force members continue to strive to represent the SCMA on all fronts and to stay abreast of activities and issues concerning organized medicine and HIV infection/AIDS.

The SCMA AIDS Task Force members welcome your comments and concerns and are certainly interested in addressing your needs on the local level. Please feel free to contact committee members or staff if we may be of assistance.

Respectfully submitted,
Charles S. Bryan, M.D., Chairman

THE PUBLIC RELATIONS COMMITTEE

Public relations activities were carried out during 1989-90 based on the committee and SCMA Board of Trustees approved annual public relations plan. Highlights of activities conducted this year include the following: (1) cooperative efforts of public and private sectors—for example, Governor Campbell's coupon program designed to combat infant mortality in SC by encouraging early and continuous prenatal care; (2) continued publicity of the Health Education Van, both on a statewide and national level; (3) media relations; (4) public service announcements; (5) the development of a new membership recruitment poster; and (6) the development of a slide presentation on the SCMA.

Staff has worked on a regular basis with the media throughout this past year on health care topics such as Medicare, Medicaid, indigent care, national health care initiatives, teenage pregnancy, infant mortality and many other issues impacting our current health care environment.

The "SCMA Newsletter" continues to be a primary source of timely information regarding issues of concern to the membership. Regular features of the newsletter include updates on SCMA Board of Trustees activities, Medicare, Medicaid and SC PRO.

The SCMA Library continues to be expanded, including the audio/video loan service, thus providing a convenient resource of information to our members.

Response from physicians wishing to serve as media contacts has been overwhelming. A computerized list of contacts will be generated in the near future and updated periodically.

Staff continues to provide support to county medical societies, specialty societies and the auxiliary in their PR activities.

News clips on topics of interest and concern to organized medicine have been regularly distributed to board members. House of Delegates, Board of Trustees, and Executive Committee position statements since 1972 have been compiled and are updated on a regular basis.

The committee continues to offer annual awards for journalists exemplifying outstanding reporting in the field of medicine. An award is presented in each category of print, radio and television media.

A community service award will be presented for the first time this year to a deserving county medical society. We acknowledge the tremendous amount of quality community service activities being conducted on the local level and wish to recognize publicly the efforts of county societies excelling in such community based projects.

The Public Relations Committee is pleased with the quantity and widespread distribution of interest in association activities from media throughout South Carolina. We expect to continue with our proactive relationship with the media and look forward to good things happening in the future. The committee encourages SCMA members to consult our public relations staff for advice and assistance in conducting PR activities on the local level. Your comments and recommendations are welcomed by staff.

Respectfully submitted,
Daniel W. Brake, M.D., Chairman

THE SCMA/JUA PHYSICIANS RISK MANAGEMENT COMMITTEE

This committee has been quite active this year. A number of programs have been presented in different areas of the state. We have had a very fine response to our request for additional physicians to help in defending those who have had a suit filed against them. We can readily see that our motto, "South Carolina Physicians Helping Physicians," is much more than words because it actually takes place every day.

That is the basis for the improvement we see in the professional liability situation in our state. Significant reductions in insurance premium rates for both the Joint Underwriters Association (JUA) and Patients' Compensation Fund (PCF) are effective this spring. We also see improvement in less tangible ways.

I want to express appreciation to committee members, Drs. Bart Barone, John Hunt, Danny Paysinger, Roy Skinner, John Brown and Billy Fairey who give so much of their time to the success of our program throughout the state. Special thanks also go to Drs. Frank Shealy, John Molnar, Birnie Johnson, Bill James and others for their invaluable help.

Dr. Bill Cantey is no longer involved in the program after many years of dedicated service. We are forever grateful to Bill for all the ways

he was of service to our program and to South Carolina physicians.

We continue to have the full support of Mr. Cal Stewart of the JUA and PCF. His help and advice are essential to continued success of the risk management program and to the improvement in the professional liability situation in our state.

The person who keeps us on schedule and on the ball is Ms. Joy Drennen of the South Carolina Medical Association staff. She continues to be the support that we need to keep the program functioning well and well organized.

We look forward to having a continuing and effective risk management program during the coming year. The committee is available to help with programs for medical societies, specialty societies and other groups.

Our guest for the Annual Meeting will be Robert S. Brittain, M.D., of Colorado, who is a specialist in risk prevention matters. He will speak on Friday morning, April 27.

I continue to appreciate the opportunity to work with this committee and with all South Carolina physicians.

Respectfully submitted,
Euta M. Colvin, M.D., Chairman

REPORT OF THE EDITOR OF *THE JOURNAL*

This year marks the 85th anniversary of continuous publication of *The Journal of the South Carolina Medical Association*. On our agenda for discussion at the Annual Meeting will be the desirability of a formal mission statement for the benefit of those whom we serve: (1) authors; (2) readers; (3) the SCMA; and (4) the people of South Carolina.

In 1900, the president of the SCMA urged at our Annual Meeting: "Let us no longer bear the stigma of leaving no record of our deeds." *The Journal* became reality in 1905 primarily as a forum for the observations of practicing physicians. Many factors—most notably the growth of medical school faculties—discourage today's practicing physicians from attempting to publish their observations. We feel strongly

that a major purpose of *The Journal* is to encourage scholarship by practicing physicians.

Special symposium issues have become increasingly popular with our readership. We welcome proposals for new topics. Recently, our editorial board has approved a set of guidelines for guest editors of symposium issues. We feel that such issues should promote cooperation and goodwill throughout South Carolina, and should therefore be inclusive of all potential contributors and/or groups of contributors whenever possible.

The association's decision to distribute the Legislative Update, SCMA Newsletter, and CME Calendar through *The Journal* has, we think, also enhanced readership appeal. We operate on a limited budget and are fortunate

to have a number of loyal advertisers. Let us all say "thank you." Joy Drennen, our Managing Editor, has continued to spearhead our advertising campaigns in addition to her many other responsibilities.

Finally, we strive to keep in mind that ours is a uniquely South Carolina journal—by and for South Carolinians. As a matter of policy, we nearly always decline submissions from out-of-state. We believe that state medical journals such as ours have a unique ecologic niche in the landscape of medical publishing. Our continuing goal is to define that niche more

clearly, and we always welcome the suggestions and criticisms of SCMA members. Our immediate goals are to promote scholarship, cooperation and goodwill, but our overriding purpose is to promote health care delivery for all South Carolinians.

I thank the members of the Editorial Board for their support and guidance, and the SCMA membership for the privilege of serving you as editor.

Respectfully submitted,
Charles S. Bryan, M.D., Editor

THE YOUNG PHYSICIANS' SECTION REPORT

The SCMA Young Physicians' Section held its annual section meeting during the SCMA Annual Meeting in April '89. We set several objectives for the upcoming year.

When the section first became organized, we conducted a young physician survey. We have addressed several of the concerns of young physicians, including placing quite a number of them on SCMA committees. One of the services requested by the young physicians was a Financial and/or Tax Planning seminar. This has been included on the agenda for the 1990 Annual Meeting.

The section sent a delegate and alternate delegate to the AMA Young Physicians' meeting in June '89 and the AMA Interim Meeting in December '89.

The section was formed to include young physicians in organized medicine, since about 32% of South Carolina physicians are defined as young physicians. To qualify for the section, physicians must be under forty (40) years old or in their first five (5) years of practice.

One of the section's greatest accomplishments was having our former chairman, Roger A. Gaddy, M.D., elected to the SCMA Board of Trustees.

We have an excellent group of leaders with Dr. Dan Brake as our President and with the outstanding management of the Board of Trustees of the SCMA. I have encouraged all young physicians in South Carolina to become actively involved with the SCMA at every level and to express any suggestions or comments

they might have to their board Trustee. I have also encouraged young physicians to assume leadership roles in the communities of South Carolina. As physicians, we are among the most highly educated and highly visible members of each of our communities and have excellent opportunities to represent the profession favorably.

While it is understood that such voluntary activities as SCMA involvement and community involvement will take away from time to actually practice medicine, I think on a larger scale, such activities help the practice of medicine favorably over a longer period of time. An investment of time now will surely yield better returns in the future. I think we, as young physicians, should make our elective representatives at every level aware of our concerns with third party interventions in medicine, including government laws involving Medicare and Medicaid, as well as possible restrictions on access to care as a result of intervention by other third parties. I do believe that our government officials are responsive to their constituents; I also believe their constituents have to make themselves heard.

I also further challenge every young physician to become well versed in legislation and regulations affecting the practice of medicine in all types of health care settings. I think it is our responsibility to understand the current HCFA interpretations of Medicare regulations which have the effect of Federal Law and to understand how this type of legislation affects

our hospitals in our communities as well as our individual practices. We tend at times to be so caught up, and perhaps rightfully so, in our individual practices of medicine and our interests for each patient's well being, that we might overlook a rather large forest while concentrating on some trees.

The decade of the 1980's and medicine was recently reviewed rather thoroughly in the *American Medical News* in the January 5, 1990 issue. The comments of 58 physicians who entered practice in the past decade were published. Forty-six of these physicians expressed

negativism about their medical practices. We must attempt to change this.

I would hope that when the decade of the 1990's is reviewed by the news media, we will have a larger percentage of positive letters from interviewees.

The officers of the Young Physicians' Section will continue to urge young physicians to become involved in medicine, by joining at the local, state and national levels.

Respectfully submitted,
Gerald E. Harmon, M.D., Chairman

REPORT OF THE EXECUTIVE VICE PRESIDENT

The year 1989 has been a good one for the South Carolina Medical Association. The membership has continued to increase and with the support of the majority of the state's physicians the influence of the SCMA has grown. The membership year ended with a total of 3,014 members (as compared to 2,872 in 1988), and 286 honorary members, for a grand total of 3,300! There were also 163 resident and 319 student members.

Our political action committee, SOCPAC, grew slightly, and for the second year in a row, we exceeded 1,000 PAC members. At the national level South Carolina had a higher percentage of AMPAC sustaining members than any other PAC in the country. There was not a general election in 1989, but SOCPAC did participate in the special elections that were held and backed the winning candidates in all but one race.

The 1989 legislative session went well for South Carolina's physicians, and I make this distinction between physicians and SCMA members since all physicians benefit from our legislative activity. A number of bills were signed into law that were of particular interest to the SCMA. One bill created a statewide Health Insurance Pool that gives anyone who has their insurance terminated for any reason other than non-payment of premiums the opportunity to obtain coverage. The issue of infectious waste was addressed, and SCMA was successful in obtaining an exemption from most of the requirements of the bill for persons that generate fifty pounds or less of infectious

waste. In response to numerous complaints by the membership, the SCMA introduced a bill that would have required any physician doing review in South Carolina to hold a South Carolina license. This approach got the attention of lawmakers and a compromise bill was signed by the Governor on January 31, 1990 which gives the Insurance Commissioner broad powers over the many out of state review companies that currently operate in South Carolina. In coordination with the Board of Medical Examiners and the Hospital Association, we passed legislation which relaxed the requirements for licensure in the state to relieve some of the difficulties hospitals were having in recruiting physicians. We were again successful in keeping all the bills we opposed in committee or were successful in reaching a compromise that was satisfactory to the SCMA.

Hurricane Hugo created opportunities for the SCMA to be of greater service to the membership. Following the storm, the SCMA established an interest free loan fund for physicians who needed money to operate their office or to make repairs. I went to Chicago and appeared before the Board of Trustees of the American Medical Association to request that they participate in our loan fund and as a result a joint fund was established. A total of \$126,850.00 was loaned to members of the SCMA to assist in their recovery from the storm. In addition, the SCMA made a plea to physicians across the country for contributions to assist areas of particular need in the state. The result was a fund

of \$37,500.00 contributed from all over the country by the medical community.

SCMA staff worked with the Health and Human Services Finance Commission and DHEC to expand and improve the delivery of care to the medically indigent of our state. Eligibility criteria were expanded and reimbursement levels increased with the result being more care being delivered to more people.

We have attempted to keep you informed of the numerous changes in the Medicare system and of the impact they will have on the delivery system. Most of the changes have resulted in a negative impact for both patient and physician and no relief is in sight. Both the SCMA and the AMA are working with the Congress by keeping them informed of the negative impact Medicare changes are having on health delivery.

Following this meeting, the SCMA will begin the process of assessing how far we have come in the past six years and developing a plan for where we should be going. To accomplish this task we have retained McManis Associates to assist us. This, you may recall, is the firm that provided assistance in 1983-84 when we reorganized the SCMA and developed a five-year plan for the organization.

On January 1, 1989 the SCMA-Members' Insurance Trust installed a computer and the necessary software to process the health claims for the MIT in-house. The MIT is now totally self-sufficient with the exception of reinsurance which is provided by Lloyds of London. The claims processing system is working great as I am sure any of the almost 6,000 people who are insured by the system will confirm. If you have not looked at the health policies provided by the MIT, I recommend that you do. In other areas of insurance we have had tremendous response to the disability program endorsed by the SCMA and we anticipate that the new life insurance program will be of as much benefit to our members.

Two years ago, following the passage of the Tort Reform legislation, the House directed that I provide an annual report on the impact of the law. Last year in a separate report I told you that the premiums for the JUA were not

being increased and felt this was due mainly to tort reform and our aggressive risk management program. This year I am including my report on tort reform in this report and it is very concise. The JUA has voted to reduce premiums to physicians this year by 20%. In addition the Patients' Compensation Fund has reduced the contribution from 30% to 20% for physicians who have been in the program four years or more. I again credit primarily the tort reform bill and the risk management activities of the SCMA for these changes. When considering these changes keep in mind that the reduced JUA premium automatically reduces all the PCF payments and compounds the impact of the 10% cut. Our liability climate is improving and may be the best in the country.

The SCMA received two awards from AMPAC last year; one for the most contributions per member and another for first place in all AMPAC activities. For the fourth year in a row we have received an AMA award for increasing membership, and our Young Physicians Section received an award for an outstanding outreach program which recruited 73 new members.

As reported in the Report of the Treasurer, the SCMA is in sound financial shape as are the subsidiaries. It appears that the first phase of the dues increase has been implemented with no negative impact on membership at all. I hope this is an indication that you are satisfied with the results the SCMA is achieving on your behalf.

I want to take this opportunity to thank the county medical societies that I had the good fortune of visiting for their hospitality and for affording me the opportunity of meeting with them.

Finally, on behalf of the staff and myself, I want to express our appreciation to the leadership and the membership for the support we have received this past year. Thank you very much.

Respectfully submitted,
William F. Mahon,
Executive Vice President

REPORT OF THE SCMA DELEGATION TO THE AMA

This year, in order to have them appear in the earliest possible issues of *The Journal*, the reports of the SCMA Delegation to the AMA on each AMA meeting have been published as special inserts. The Annual Meeting report appeared in the July issue and the Interim Meeting report in the January issue. In addition, for the Interim Meeting I initiated the idea, when I reported briefly on particular items, of referring to the specific page of the issue of the *AM News* where a more detailed report could readily be found. I hope that this format has been helpful, and meets with the approval of our membership.

As follow-up of the SCMA Resolution No. 96 (A-90) about violations of Section 1801 of PL 89-97, the original Medicare law, which was referred to the AMA Board of Trustees, we have received the following report:

The Board *VOTED* that the AMA Office of the General Counsel and the Division of Legislative Activities monitor amendments to the Medicare law and regulations promulgated to implement provisions in the Medicare law to determine if any provisions impose "supervision and control" over the practice of medicine or impose onerous burdens on physicians or impermissibly interfere with the physician-patient relationship in violation of Section 1801 or constitutionally protected rights of Medicare beneficiaries to make important medical treatment decisions in consultation with their physicians, and file litigation in appropriate cases when violations are found that have not been corrected in response to AMA testimony or written comments.

At its January meeting the SCMA Board of Trustees considered a summary report from the Delegation, originally scheduled for discussion at the Board Retreat in September which was cancelled by Hugo. This included background information on the organization of the Delegation, changes considered in past years, including some recommended in the McManis Report, and some suggestions of possible changes for the future. The Board felt that no changes should be made at this time in the terms of office and number of terms for alternate delegates and delegates, or in the *modus*

operandi of the Delegation.

The Delegation has been particularly aware of the need to curtail expenditures as much as possible, and will continue to be diligent in exercising fiscal restraint. At the Interim Meeting in Honolulu, the Saturday night open reception which has become a customary feature in recent years was omitted.

The Delegation has recommended, and the Board has concurred that the Special Sections of the SCMA and AMA—Medical Students, Resident Physicians, and Young Physicians—should be strongly supported and should be given separate budgets. They are the *FUTURE of MEDICINE*.

Some unfavorable reports in the media, and the recent administrative changes in the AMA have led some physicians to question the effectiveness, stability, and even the viability of the AMA. Your Delegation members feel that the AMA is in excellent shape, and that its influence will continue to increase. We are pleased that Dr. Alan R. Nelson, AMA President, will attend our Annual Meeting, and we look forward to his report on the current status of the AMA. The strength of the SCMA and the AMA lies in Membership. Both organizations need to have every eligible physician as members. In view of the recent favorable changes in the medical liability insurance rates of both the JUA and the PCF, which will accrue to the benefit of *every* practicing physician in South Carolina, there can be no excuse for any physician to cite the cost of membership as a reason for failure to join. We urge every physician in South Carolina to join both the SCMA and the AMA!

Each member of your Delegation is deeply grateful for the privilege of representing the SCMA at the meetings of the AMA; we hope that our representation will continue to meet with the approval of the membership.

We solicit once more your input to us, so that we may better represent the needs and the opinions of all of you. We express again our appreciation and our admiration for the work of our Auxiliary, both here at home and at the AMA level. Indeed they "do us proud!"

This will be my last report to the House of

Delegates as I do not intend to run for reelection, and will step down at the end of my current term, which will actually be December 31. I will, of course, attend the Annual and the Interim Meetings of the AMA this year. It has been a distinct privilege and high honor to represent the SCMA at the AMA House of Delegates, and I am deeply grateful to every member for affording me this opportunity.

John C. Hawk, Jr., M.D.

REPORT OF THE SCMA MEMBERS' INSURANCE TRUST

The SCMA Members' Insurance Trust (MIT) completed the last fiscal year with a surplus of \$227,373.00 in income over expenses. Enrollment in the MIT at the end of the year stood at 2310 and this is a 25% increase over the previous year. In addition to the 2310 physicians and their employees, we also cover 3404 dependents. This is the second year in a row that our growth exceeded 20%.

Effective December 15, 1989 we increased our premiums by 17% after a period of 22 months with no increase in premiums. The MIT expects to pay claims in excess of \$5,000,000.00 this fiscal year. We currently have stop loss insurance both for individuals and for the group through Lloyds of London.

We completed our first year of in-house claims processing and the new system functioned very efficiently. This year we hope to begin marketing our claims processing services to other self-insured plans to offset the administrative costs of the MIT to our own plan.

In summary, I am pleased to report that the Members' Insurance Trust is in excellent shape and we anticipate that it will remain fiscally sound in the future.

I would like to express my sincere appreciation to the members of the Board and to the SCMA staff for their hard work this past year.

Respectfully submitted,
Gerald Wilson, M.D., President

SCIMER REPORT

A total of 15 scholarship awards will be granted by SCIMER at the 1990 Annual Meeting of the South Carolina Medical Association in April. There will be ten scholarships awarded jointly with the South Carolina Medical Association Auxiliary—five to each of two medical schools in South Carolina. The others awarded are the Stuckey Scholarship funded by a provision in Dr. Stuckey's will, two scholarships provided by donations from an upstate group of physicians and one from funds donated by an anonymous donor. The last award will be presented to the medical student whose essay on the topic of medical ethics or a medical economics subject is judged the best.

The speaker for the Leonard Douglas Memorial Lecture will again speak on a medical ethics topic. We have had the cooperation of the Medical Ethics Committee of the Association in securing this speaker.

We are appreciative of all the donations to SCIMER this year. The contributions received from the annual dues billing have been quite significant. This allows us to continue the scholarship awards and to look forward toward other worthwhile activities. Contributions such as memorials are welcomed and most appreciated.

The SCIMER Board is grateful for SCMA staff help from Bill Mahon and Ann DePalma. We are also very appreciative of the service of those members whose terms on the board expire this year. We look forward to welcoming the new members of the board.

I am grateful for the opportunity to again serve as President of the SCIMER Board as I have for a number of years. It will be my request that the board select someone else for this position when officers are selected in April.

Thanks to all for the many expressions of friendship and support last year which were and are very meaningful to me.

Respectfully submitted,
Euta M. Colvin, M.D., President

REPORT OF THE SOUTH CAROLINA POLITICAL ACTION COMMITTEE

The South Carolina Political Action Committee has completed the 1990 year with a total of 1018 members.

In the fall of 1989 there were three special elections held. SOCPAC participated in all three races. Holly Cork of Beaufort and "Son" Kinon of Dillon were elected and were supported by SOCPAC. The only loss was that of Leone Castles (wife of Dr. Guy Castles) to Jim Harrison in the primary.

November, 1990 is election year for the House of Representatives, the Governor and the Lt. Governor. We encourage SCMA members to participate in local campaigns and actively support the candidates of their choice.

The SCMA would like to commend Dr. Randolph Smoak on an outstanding job as Chairman of AMPAC.

Our 1990 SOCPAC luncheon speaker is Congressman J. Roy Rowland, Jr., M.D., from Georgia.

On behalf of the SOCPAC Board, I wish to thank you for giving us the opportunity to serve on this critically important committee.

Respectfully submitted,
William M. Hull, Jr., M.D., Chairman

REPORT OF THE SOUTH CAROLINA MEDICAL CARE FOUNDATION

A meeting of the Board of the Medical Care Foundation is planned for April at the Annual Meeting in Charleston. The Medical Care Foundation has been relatively inactive for the last several years since the PRO was awarded to Metrolina. The South Carolina PRO now is in the hands of Carolina Medical Review, the South Carolina PRO and a subsidiary of North Carolina Medical Review. As many already know, Dr. John Rheney of Orangeburg has recently accepted the position as Medical Director of Carolina Medical Review.

There has been very little, if any, productive activity within the framework of the Medical Care Foundation. It is planned that we will make some decision and effort to place the Foundation on an inactive status at our Board Meeting in Charleston in April. There is a remote possibility of the need for reactivation at some point in time and, since the MCF mechanism is already in place, it would be best to not completely disband.

Respectfully submitted,
W. J. Goudelock, M.D., President

REPORT OF THE HEALTH AND HUMAN SERVICES FINANCE COMMISSION

The State Health and Human Services Finance Commission is responsible for securing adequate access to quality medical care for its clients through a partnership of public funded agencies and private physicians and organizations. This is done by establishing a range of medical benefits for Medicaid recipients and using federal and state monies earmarked for the South Carolina Medicaid program to reimburse physicians and other medical services providers for rendering care to those recipients. For the most part, this system works. The public agencies are doing all they can to support the Medicaid program and there are many fine private physicians throughout the state more than willing to treat Medicaid recipients, but when it is taken into consideration that:

- One-third of the 50,000 babies born in South Carolina in 1989 were on Medicaid;
- One in ten hospital admissions statewide were patients claiming Medicaid as their only source of insurance;
- Almost all persons diagnosed as being HIV positive will eventually be Medicaid recipients; and
- Recent expansion of maternal and child health programs offer Medicaid coverage to persons with an income considered at 185% of poverty, it becomes obvious that more private physicians are needed to help carry the load.

In 1989 75% of the licensed physicians in South Carolina were enrolled in the Medicaid program but only 39% treated over 25 recipients during the year. The Finance Commission knows that at one time there were valid reasons for this low percentage. In years past, physicians have been asked to serve Medicaid recipients, who are non-compliant and difficult to treat, for reimbursement well below their operating costs. They were also asked to complete complex paperwork to receive that payment. Physicians showed their displeasure with that system by dropping out of the Medicaid program, or reducing their participation. The Finance Commission realized at that point that adjustments had to be made, and some have been made.

- In the last two years the Finance Commission has greatly increased its reimbursement rates for most commonly performed procedures, some by more than 100%.

- Many edits have been taken off of our claims processing system to streamline Medicaid billing.

- Reimbursement rates for EPSDT screenings have been increased and those screenings now follow the schedule recommended by the American Academy of Pediatrics.

- Supplemental procedure codes offering enhanced reimbursement rates are available to physicians performing additional services on pregnant women and children.

- Enhanced reimbursement rates are also available for physicians who are willing to offer services to AIDS patients on Medicaid.

- Healthy adult physical exams are now reimbursable through the Medicaid program.

- Office visits are now billable when performed up to a date of surgery.

Obviously, the present administration at the State Health and Human Services Finance Commission is sympathetic to the problems of the private physician. In fact, in many ways, communication with the private physician has become job one for the Finance Commission in 1990 as:

- Representatives from the Finance Commission have served on the three physician Task Force Committees sponsored by DHEC and have been commended by the physicians on those committees for their willingness to investigate suggested resolutions to specific physician concerns;

- Representatives from the Department of Physician Services within the Finance Commission are conducting county workshops in an effort to educate physician billing staffs on proper billing procedures. These workshops are informal affairs where questions are encouraged and individual help can be received;

- Those same representatives are also available to make on-site visits to private physicians' offices at the physicians' or billing clerks' convenience to resolve Medicaid-related problems; and

- Increased personnel in the Department of Physician Services guarantees that there will be someone available when a physician or someone from his staff calls in with questions.

These changes have brought Medicaid into the mainstream so that a healthy partnership can be established between the Finance Commission and private physicians, ensuring access to quality medical care for all Medicaid recipients. Increased reimbursement has been

the number one request of physicians and the State Health and Human Services Finance Commission has responded. Increased participation is now being asked of physicians to assist in providing cost efficient and needed health care to the needy of our state.

Respectfully submitted,
Eugene A. Laurent, Ph.D.,
 Executive Director

REPORT OF THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

Infant Mortality: South Carolina continues to make slow but steady improvement in reducing the infant mortality rate. Although South Carolina is above the national rate, the state is no longer 50th out of 50 states. Some states are experiencing considerable increases so our continued improvement is a significant achievement, which reflects the close cooperation between the public and private health care sectors. The state's continuing efforts to reduce infant deaths include increased emphasis on early and continuous prenatal care; programs aimed at improving pregnancy outcomes; and the expanded Medicaid program.

However, there is a serious concern about the increase in the number of babies born with cocaine in their systems due to substance abuse by the mother. More emphasis should be placed on the education of expectant mothers about the dangers of substance abuse on the unborn infant. Under the direction of the Maternal, Infant and Child Health Council, the state is now pulling together various agencies, interested parties, and leaders of the medical profession to study and make recommendations regarding the growing problem of substance abuse in pregnant women and infants.

Family Planning. During the last year, the Health and Human Service Finance Commission expanded the number of services which are reimbursable under family planning for Medicaid patients in several areas not previously funded. Unfortunately, Medicaid covers a small segment of reproductive age women in need of family planning services. Therefore, DHEC has recommended additional state funds be appropriated to substantially expand

family planning services in the state.

Obstetrical, Pediatric and Family Practice Task Force: The SC Obstetrical Task Force completed its work in April of last year and presented several recommendations which are currently being implemented. The recommendations cover a broad spectrum of approaches to improving access to perinatal care. Both the Pediatric and Family Practice Task Forces are reviewing issues and developing recommendations to improve coordination of care for children and adults. When the recommendations are completed, they will go to the professional organizations and to the SCMA for cooperative implementation.

Minority Health Task Force: The SC Minority Health Task Force completed its yearlong examination of health and health care services in South Carolina and released several recommendations to close the gap in health status between blacks and whites. The task force stressed access, availability and appropriateness of health services as cornerstones in the recommendations.

Immunization: The recent outbreak of measles at Clemson University emphasized the shortage of funds for immunization programs in South Carolina. Fifteen confirmed cases of measles were reported in 1989.

AIDS/Sexually Transmitted Diseases: While the number of AIDS cases in South Carolina continues to increase monthly, we have seen significant advancements in the state's AIDS program. This includes the offering of T4 lymphocyte testing, the AZT program for persons with HIV infections, and the partner notification program. The program is

continuing its aggressive program of education, counseling and testing. As of January 31, 1990, 871 AIDS cases and 3,360 persons with HIV infection had been confirmed in South Carolina. Over half of the patients (484) had died.

There has been about a 10 percent increase in syphilis and gonorrhea cases reported and treated last year. Syphilis cases went from 730 in 1988 to 874 in 1989. Gonorrhea cases went from 14,959 in 1988 to 16,441 in 1989. Geographically, significant increases occurred in York County, 86 percent increase; Florence County, 83 percent increase; Spartanburg County, 79 percent increase, and Williamsburg County, 52 percent increase.

Another significant aspect of the state's STD program is that there was an almost 70 percent increase in resistant gonorrhea from 1988 to 1989, up from 458 to 776 cases reported.

Health Promotion: July 1, 1989 marked the beginning of the first full year of DHEC's Center for Health Promotion whose goal is to provide public and professional education, community health screenings and coalition building. A significant aspect of the center is the refocusing of energies on community activities rather than individuals in a clinic setting.

A significant activity of the Center for Health Promotion is the Florence Heart-To-Heart Project. DHEC was asked by the national Center for Disease Control, which funded the five-year project, to develop a model program for the nation. It is the only such project in the United States. The community-based program encourages people to improve their lifestyles.

While working extensively in local communities, DHEC and its health districts and county health departments are fulfilling a role which is very supportive of private physicians who will be seeing patients who are more aware of the importance of taking care of themselves.

Hugo Support: One way DHEC responded to the destruction caused by Hurricane Hugo in September 1989 was to form teams of nurses, environmental health staff and social workers. This team partnership was effective in addressing rapidly both the health and environmental problems affecting health in distressed communities. Hugo emphasized the

necessity of having an up-to-date emergency plan, and the importance of a close working relationship between local and state private and public medical and health sectors.

Respectfully submitted,
Michael D. Jarrett, Commissioner

DHEC PHYSICIAN HEALTH DIRECTOR

The South Carolina Department of Health and Environmental Control is seeking a physician health director to supervise the public health activities in its Wateree District (Sumter, Clarendon, Lee, and Kershaw counties).

This individual (with a management team representing nursing, health education, nutrition, administration, environmental health) supervises and supports a team of 230 technical and professional staff. Duties include: liaison and consultant with public/professional communities, media and other agencies and management of a broad base of public health programs such as Maternal and Child Health, Disease Control, Environmental Sanitation, etc.

This person must be able to develop programs and to plan, direct and coordinate the work of others. The individual must be a South Carolina licensed physician with specialty boards and/or Master's in Public Health preferred.

Salary is negotiable and competitive with other Southeastern states. Medical School Department of Family and Preventive Medicine appointment is potentially available.

To discuss and for more information call Dr. Harold Gabel, South Carolina Department of Health and Environmental Control (803) 737-4000 or write to above at 2600 Bull Street, Columbia, SC 29201.

REPORT OF THE S. C. STATE BOARD OF MEDICAL EXAMINERS

This past year has been a very active and effective year for the board. This report shall present a brief statistical summary and review of the past year.

LICENSURE: In 1989, the board issued 529 permanent licenses to physicians. This compares to 481 such licenses issued in 1988. One hundred fifteen of these licenses were issued by way of the FLEX examination. Four hundred fourteen were issued by endorsement of credentials through the national board or other state boards. Of the 529 permanent licenses issued, 31 were issued to graduates of foreign medical schools. By way of comparison, in 1988, graduates of foreign medical schools received 20 permanent licenses. Of the 529 permanent licenses issued, 24 were issued to Doctors of Osteopathy.

This board administered the FLEX examination in June and in December. In June, 14 applicants took the exam; 13 passed and one failed. In December, a total of 14 took the exam; 12 passed and two failed.

The SPEX (Special Purpose Examination) was administered in March, June, September and December, 1989. The results were as follows: March exam—20 took the exam; 16 passed and four failed; June exam—10 took the exam; nine passed and one failed; September exam—six took the exam; four passed and two failed; and December exam—10 took the exam; eight passed and two failed.

Limited licenses are for residency training or other supervised practice environments approved by the board. A limited license is for a one-year period (July 1-June 30) or a part thereof. A total of 296 limited licenses were issued in 1989. Limited licenses were issued to 241 United States/Canadian graduates; 55 limited licenses were issued to graduates of foreign medical schools.

Seven new physicians' assistants were certified by the board in the past year. There are 58 physicians' assistants certified in South Carolina.

The Medical Directory of physicians licensed in South Carolina was again printed in 1989. In the 1989-90 directory there were 5,479 physicians listed residing in-state, and 1,550

licensed in South Carolina, but residing out-of-state.

INVESTIGATORY AND DISCIPLINARY ACTIVITIES: In 1989, the board received 170 complaints. This compares to 135 received in 1988. Forty-nine sanctions were levied by the board in 1989. These resulted in three revocations; 12 voluntary surrenders; seven suspensions; five indefinite periods of probation; one public reprimand and 21 agreements with conditions. In 1989, 144 complaints were dismissed for lack of evidence of a violation of the Medical Practice Act.

LEGISLATIVE CHANGES: In 1989, the Legislature approved changes in the board's FLEX and SPEX requirements. The board was granted discretion to accept certain FLEX scores if the applicant was board certified. An applicant for licensure was exempted from the SPEX requirements if he was board certified or recertified within the last ten years.

BOARD MEMBERSHIP: Two board members were re-elected to the board: J. Ernest Lathem, M.D., of Greenville, representing the Fourth Congressional District, and Vernon E. Merchant, M.D., representing the Third Congressional District. Elected to the board from the State-At-Large was Roy J. Ellison, M.D., of Greenville.

Current officers and members of the board are: J. Ernest Lathem, M.D., President (re-elected as President 1/90); R. Patten Watson, M.D., (elected as Vice President 1/90); James C. Holler, Jr., M.D., (elected as Secretary 1/90); Vernon E. Merchant, Jr., M.D.; C. Drayton Riddle, Jr., M.D.; Mrs. Esther H. Tecklenburg; James S. Garner, Jr., M.D.; James R. Edinger, D.O.; Stephen I. Schabel, M.D.; and Roy J. Ellison, Jr., M.D.

Current members of the Medical Disciplinary Commission are: Alan W. Fogle, M.D.; Charles J. Owens, M.D.; John A. Ouzts, III, M.D.; Bryan L. Walker, M.D.; Boyce M. Lawton, Jr., M.D.; C. Alden Sweatman, Jr., M.D.; James M. Rainey, M.D.; Martin H. Zwerling, M.D.; Frederick G. Douglas, M.D.; W. Wallace Fridy, Jr., M.D.; Donald G. Gregg, M.D.; Jack A. Evans, Jr., M.D.; James L. Maynard, M.D.; Ronald P. Hargrave, M.D.; Robert E.

Lee, M.D.; Theodore E. Gagliano, M.D.; Daniel M. Ervin, M.D.; and Joseph W. Dunlap, Jr., M.D.

Respectfully submitted,
Stephen S. Seeling, Executive Director

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RESOLUTIONS

SUBMITTED BY: *Charleston County
Medical Society*

SUBJECT: **STATEWIDE
EMERGENCY
RESPONSE TEAM**

WHEREAS, Hurricane Hugo in September 1989 caused significant destruction; and

WHEREAS, The Charleston County medical community was capable of responding to the medical needs of the area with significant assistance from other sources; and

WHEREAS, Had the storm occurred 30 miles south, the devastation would have been much more severe and the Charleston medical community would not have been able to respond adequately; and

WHEREAS, There are other urban areas along the southeast coast that could similarly be devastated; and

WHEREAS, Other disasters might paralyze other urban areas of the state; therefore, be it

RESOLVED; That the South Carolina Medical Association consider the establishment of a statewide emergency response capability.

SUBMITTED BY: *Kenneth R. Warrick, M.D.*
SUBJECT:

**ESTABLISHMENT OF
A NEW POSITION
ON SCMA BOARD
OF TRUSTEES**

WHEREAS, Between meetings of the SCMA House of Delegates, the Board of Trustees carries out the policies of the House of Delegates and sets other policies as necessary; and

WHEREAS, State and federal legislation, third party payors, and other issues impact the various medical specialties in different ways; and

WHEREAS, The SCMA has recognized the great need for input to the House of Delegates from delegates representing the various specialty societies in addition to representation of SCMA members on a by district basis; and

WHEREAS, This specialty society representation constitutes approximately 11% of the overall House of Delegates; and

WHEREAS, The Board of Trustees should receive the same input from the various specialty societies for its continued operation throughout the year; therefore, be it

RESOLVED, That the SCMA bylaws be amended to establish a new member position on the Board of Trustees for a Trustee representative of the Specialty Society Caucus.

AMA SPECIAL GUEST: ALAN R. NELSON, M.D. PRESIDENT, AMERICAN MEDICAL ASSOCIATION

Alan R. Nelson, M.D., President of the American Medical Association since June, 1989, will address the SCMA House of Delegates on Sunday morning, April 29, 1990.

Dr. Nelson, a private practitioner of Internal Medicine and Endocrinology in Salt Lake City, was first elected as an AMA Trustee in 1980. From 1986 to 1988, he served as Chairman of the Board of Trustees. Before service on the Board, Dr. Nelson had been a member of the AMA's Council on Legislation and President of the Utah Medical Association.

A graduate of Northwestern University School of Medicine, Dr. Nelson interned at Highland-Alameda County Hospital in Oakland, California, and took residency training there and at the University of Utah Affiliated Hospitals. Following his training, he served in the U. S. Air Force as Chief of Medical Services at George Air Force Base in California. He has practiced at Memorial Medical Center in Salt Lake City since 1964 and is on the staff of Latter Day Saints Hospital.

Dr. Nelson is a Fellow of the American College of Physicians and a member of the Endocrine Society. He is also active in clinical teaching and is Clinical Professor of Medicine at the University of Utah School of Medicine.

Throughout much of his career, Dr. Nelson has been involved in medical peer review and quality assurance. In 1975, he was elected to the Institute of Medicine and served on its Governing Council from 1984 to 1987. He was also a commissioner of the Joint Commission on Accreditation of Healthcare Organizations, and has authored numerous papers and several



book chapters on medical peer review.

Dr. Nelson has been an AMA spokesman at congressional hearings on national health insurance, peer review organizations, vaccine injury compensation and physician payment. He has also represented the AMA at hearings of the President's AIDS Commission and the Food and Drug Administration.

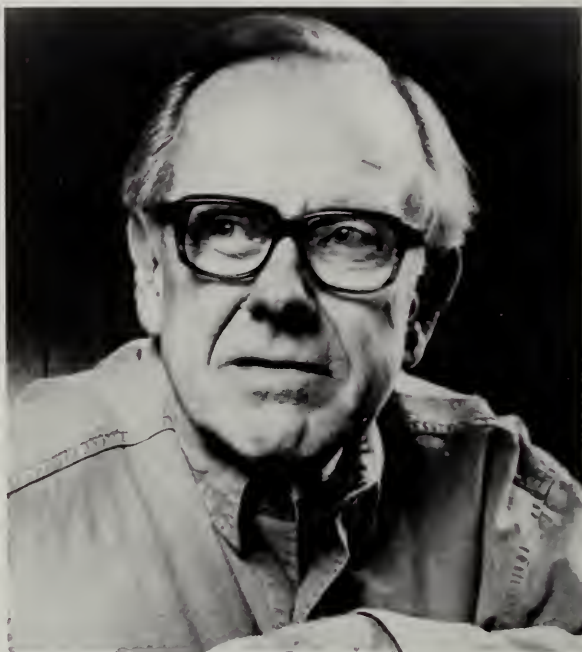
He and his wife, Gwen, have three children, John, Shannon and Alan L. For recreation, he enjoys skiing, tennis and backpacking in the western wilderness areas.

FEATURED SPEAKER: PRESIDENT'S INAUGURAL BANQUET FERROL SAMS, M.D.

Ferrol Sams, M.D., is the special speaker at the President's Inaugural Banquet on Saturday evening, April 28. He is the author of two novels, *Run with the Horsemen* (1982) and its sequel, *The Whisper of the River* (1984), and two collections of stories entitled *The Widow's Mite* (1987) and *The Passing: Perspectives of Rural America* (1988). His works have been regional bestsellers and have sold more than 350,000 copies in hardcover and paperback.

A graduate of Mercer University and the Emory University School of Medicine, Sams now lives in Fayetteville, Georgia, where his family has lived for generations. He has been a practicing physician in Fayetteville since 1951, and is currently Medical Director of the Fayette Medical Clinic.

Sams and his wife, Helen, have four children and ten grandchildren.



SOC PAC LUNCHEON SPEAKER CONGRESSMAN J. ROY ROWLAND, JR., M.D.



The Honorable J. Roy Rowland, Jr., M.D., will be the featured speaker at the 1990 Annual Meeting SOCPAC luncheon on Saturday, April 28, 1990 at 12:45 p.m. Congressman Rowland has had a long and impressive career as a politician and is currently serving his fourth term in the U. S. House of Represen-

tatives, representing Georgia's eighth Congressional District.

Following his graduation with honors from the Medical College of Georgia in 1952, Dr. Rowland practiced as a family physician in middle Georgia for 28 years, became a community and state leader in organized medicine and served three terms in the Georgia House of Representatives.

A native of Wrightsville, Georgia, Dr. Rowland is one of only two medical doctors in Congress today. From 1985 through 1988, he was the sole physician serving in Congress, the only period in history when Congress had just one M.D. in its ranks.

Congressman Rowland entered public life in 1974 when he created an organization to help inform Georgia physicians about issues of concern to medicine. This experience, he says, convinced him that more physicians should participate in the governmental process.

He is married to the former Luella Price and she has played an active role in the Congressman's political and governmental career. The Rowlands have three grown children.

Editorial

THE V-WORD AND THE FOUR C'S

My wife nearly always beats me at Trivial Pursuit—on the entertainment questions, I'm helpless. Although I usually accept defeat gracefully, a recent game was played under protest. The question in dispute: "Name the cardinal virtues."

I knew the answer cold. There are four cardinal virtues: prudence, justice, temperance, and fortitude (courage).¹ First mentioned as such in Plato's *Republic*, these have been the cardinal virtues ever since. I also knew that Trivial Pursuit would probably give a different answer. It did: faith, hope, and charity (love). For the record, these are *not* the cardinal virtues, but rather the so-called "theological virtues" mentioned a single time in the New Testament (1 Corinthians 13:13). But who was I to argue with Trivial Pursuit? Point, set, match.

I forgive the authors of Trivial Pursuit for their error. One seldom hears "virtue"—the V-word—in today's polite conversation. Hardly anybody teaches "virtue" in the schools anymore. Even moral philosophers concede that constructing a virtue-based ethics (as opposed to goal-based, duty-based, or rights-based ethics) has become a dubious enterprise. Following the lead of Alisdair MacIntyre,² they tell us that it's now "after-virtue time." We can no longer even name the virtues, much less know what they are all about or how to teach them.

In the February issue of *The Journal*, the Rev. Joe Baroody of Florence offered us an excellent list of ABC's for improving our relationship with our patients. The essence of the Rev. Baroody's message was that in our age of sophisticated technology we must remember to be compassionate. Reflecting on his article in my editorial, I promised to provide some further thoughts on the following question: which matters more, our competence or our compassion? Here goes.

As a serious issue, this question first struck me late one night during my residency. The patient was a frail, elderly woman with an

acute myocardial infarction. She was going into shock, and we called a cardiologist. Entering the intensive care unit, having never seen the patient before, the cardiologist abruptly announced: "Mrs. Jones, I'm Dr. Smith, and I'm going to put this catheter in your heart."

Now I suppose that many persons would criticize Dr. Smith (not his real name) on the grounds that this approach to the patient epitomizes our profession's present-day shortcomings. Namely, we've made great strides in technical proficiency but along the way we've lost our human touch. Surely, Dr. Smith should have talked quietly with the patient, offered a reassuring pat on the shoulder, and sought out her relatives in the waiting room prior to inserting the catheter.

I felt that way for a while, but I now disagree. I now feel strongly that Dr. Smith's first obligation to Mrs. Jones was to insert the catheter safely and competently. I now feel strongly that he would have done Mrs. Jones a disservice had any attempts to be "compassionate" taken away from his ability to rivet his attention on the technical problems at hand. I now feel, in retrospect, that it is best for me to assume that he was just as tired as I was late that night, and that he was wise to conserve his energies. The rest of us could reassure Mrs. Jones and talk to the family. That was *our* job.

This may seem harsh. However, I submit that this opinion is not only consistent with good medicine but is also consistent with the concept of "virtue" as applied to medicine. Namely, our first obligation to our patients is to perform competently that which we allow others to pay us to do. This may vary according to the nature of our specialty.

At one extreme, those reimbursed primarily for procedures do their patients a disservice to the extent to which "compassion" detracts from competent performance of those procedures. At the other extreme, those reimbursed primarily for rendering compassion (such as pastoral care-givers) do patients a dis-

service to the extent to which fascination with technology detracts from their ability to render compassion. The truly wonderful thing about medicine is that most of us can do both. But in striking a balance, we should always strive to do well that which we are actually paid to do.

The Four C's? I would rank them in this order: (1) courage (which makes everything possible); (2) competence (which establishes credibility); (3) consistency (which ensures that competence will become reality); and (4) compassion. On the one hand, "compassion" without competence at what one claims to be able to do is fraud. Robert M. Veatch notes: "Naked virtue can produce a messianic complex in those who are not really messiahs."³ On the other hand, I submit that the consistent application of competence *is* compassion.⁴

As we gather for our annual meeting, we

continue to hear criticisms of our profession from various quarters. Let us be positive. The secret of caring for the patient is to be able to do something for the patient, and to do it well. And never before has it been possible to do so much for so many.

—CSB

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1. Pieper J: The Four Cardinal Virtues (Notre Dame, Indiana: University of Notre Dame Press, 1966).
2. MacIntyre A: After Virtue (Notre Dame, Indiana: University of Notre Dame, 1981).
3. Veatch RM: Against virtue: a deontological critique of virtue theory in medical ethics. In: Shelp EE (ed): *Virtue and Medicine: Explorations in the Character of Medicine* (Dordrecht: D. Reidel Publishing Company, 1985), pp. 329-345.
4. I would also hold that compassion is a facilitating virtue for courage and a motivating virtue for achieving competence. Hence, we have a feedback loop. Or to quote Groucho Marx: "These are my principles . . . and if you don't like 'em, I've got others."

On the Cover:

LeGRAND GUERRY, M.D., 1873-1947 PRESIDENT, SCMA, 1908

Dr. Guerry was born in Florence, received his early education in Summerville and later attended the University of the South at Sewanee, Tennessee. He graduated with highest honors from the Medical Department of the University of Georgia in 1896, married Annie Elizabeth Hawkins of Newberry County and, in 1899, settled in Columbia.

Because Dr. Guerry lived and worked in the age of the greatest development in American surgery, he exerted a powerful influence on surgical thought and practice. For almost half a century the best of surgical practice of the time was demonstrated in his surgery and in his writings. He was a charter member of the American College of Surgeons and a Charter Diplomate of the American Board of Surgery. He held memberships in the American Surgical Association, Southern Surgical Association, AMA, SCMA and the Columbia Medical Society, and held positions of authority in most. Among the honorary degrees conferred on him were Doctor of Civil Law, L.L.D., and Sc.D. He was nationally recognized for his innovative techniques in appendectomies and abdominal gunshot wounds.

According to one report, Dr. Guerry's life-saving practice of delaying surgery on a ruptured appendix was a direct result of his widespread reputation. He was often called for surgery in distant parts of the state and made his "house calls" by train and buggy. Several days usually elapsed between the call for help and his arrival at the bedside. He noted while looking over his records one day that most of the ruptured appendix patients on his road trips survived while most of those who had



COLUMBIA HOSPITAL: 1895

immediate surgery died. His research into this startling discovery led to his technique of delayed surgery which, in the days before the advent of wonder drugs, saved countless lives.

He played a major role in the development of the Columbia Hospital [now Richland Memorial] which grew from an eight bed structure to a modern institution of 500 beds. In 1947, a wing of this hospital was dedicated to Dr. Guerry with these words:

For nearly half a century, Dr. Guerry, by unfailing loyalty and patronage, has given all of his support to this institution. It is a living monument to him. . . . This institution is the child of his heart.

Dr. LeGrand Guerry died at the Columbia Hospital at 11:30 a.m., August 14, 1947. He was 74 years old.

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A SOUTH CAROLINA CANCER PERSPECTIVE

INTRODUCTION

GUEST EDITOR: FREDERICK L. GREENE, M.D.*

It is an honor and pleasure to serve as the Guest Editor for this special edition of *The Journal of the South Carolina Medical Association* dedicated to Oncology and specifically to issues regarding cancer in South Carolina. Since our last special edition three years ago, monumental strides have occurred which are now filtering from the areas of bench research to daily patient care and affect all of us in our management of the cancer patient. Specifically, issues regarding oncogenes, monoclonal antibodies, adoptive immunotherapy, imaging techniques for early cancer detection and the use of adjuvant chemotherapy are only a few of the exciting concepts in oncology for the 1990s.

According to the American Cancer Society, over 13,000 new cases of cancer will occur in South Carolina in 1990 resulting in approximately 6,500 deaths. Of these totals, breast cancer, colon and rectal, and lung cancer will prove again to be the greatest killers of our populace. The presentations in this special edition of *The Journal* reflect the interest in these specific tumor sites as well as others that may be equally significant for all South Carolinians. To our fellow South Carolinians who will be diagnosed with cancer in 1990 and to all those physicians who work feverishly in the laboratory and clinical setting to combat this dread disease—we dedicate this special issue. □

The Guest Editor and the Editorial Board of *The Journal* express their appreciation to the following organizations whose contributions permitted publication of this expanded issue on Cancer in South Carolina.

Adria Laboratories

Fujisawa Pharmaceuticals

Glaxo, Inc.

Reed & Carnick

Roerig-Pfizer

The American Cancer Society,
S. C. Division

The South Carolina Oncology
Society

* Department of Surgery, University of South Carolina School of Medicine, Two Richland Medical Park, Suite 402, Columbia, S. C. 29203.

CHEMOTHERAPY FOR NON-SMALL-CELL LUNG CANCER—NEW HORIZONS*

CAROLYN E. REED, M.D.
LETA S. CARLSON, M.D.
RON D. SCHIFF, M.D., PH.D.
CATHY H. SEYMORE, M.D.
KEITH A. THOMPSON, M.D.

INTRODUCTION

The use of chemotherapy in non-small cell lung cancer (NSCLC) has been fraught with pessimism. In fact, when physicians have been surveyed and asked if they as patients would accept chemotherapy, the answer has most often been negative. This is hardly surprising when one considers that there has been no single agent that has increased survival, objective tumor responses are usually brief, and complete responses are rare. Only a small number of single drugs has shown activity greater than 15 percent in multiple trials (Table I). However, with the advent of cisplatin, the use of combinations of drugs, and the use of agents for selected groups of patients (i.e., locally advanced disease versus metastatic disease), there emerge more hope and enthusiasm for using this modality in the treatment of lung cancer.

At the Medical University of South Carolina (MUSC), we have been evolving an approach to the use of chemotherapy in lung cancer that is based on the results of current studies, the stage of the disease, and the setting in which chemotherapy is used (i.e., preoperative, post-operative, nonoperative). A summary of important studies, a review of our results, and our rationale for future investigation follow.

COMBINATION DRUG REGIMENS WITH EFFICACY IN NSCLC

Since the addition of cisplatin to the chemotherapeutic armamentarium, three basic cis-

platin—containing combinations have been used in trials testing results in metastatic NSCLC: (1) cisplatin and doxorubicin and/or an alkylating agent (usually cyclophosphamide), (2) cisplatin and a vinca alkaloid (vindesine or vinblastine) with or without mitomycin-C, and (3) cisplatin and etoposide (VP-16). Table II illustrates the results of several studies.

LOCALLY ADVANCED DISEASE

It is evident that patients with advanced lung cancer confined to one hemithorax will respond to chemotherapy at twice the response rate of patients with extrathoracic disease (approximately 50 versus 25 percent).¹ In the revised staging system, patients with Stage III lung cancer are now divided into Stage IIIA

TABLE I
SINGLE-AGENT CHEMOTHERAPY FOR NON-SMALL-CELL LUNG CANCER*

<i>Drug</i>	<i>Response Rate (%)</i>
Cisplatin	16
Ifosfamide	27
Mitomycin-C	17
Vinblastine	27
Vindesine	16
Etoposide (VP-16)	18

* From the Divisions of Cardiothoracic Surgery (Doctor Reed) and Hematology/Oncology (Doctors Schiff and Thompson) and the Department of Radiation Oncology (Doctors Carlson and Seymore), Medical University of South Carolina, 171 Ashley Avenue, Charleston, S. C. 29425. Address correspondence to Dr. Reed.

* From Kris M, Cohen E, Gralla R: An analysis of 134 Phase II trials in non-small-cell lung cancer (NSCLC). Proc IV World Conference on Lung Cancer, Toronto 1985.

TABLE II
COMBINATION CHEMOTHERAPY
WITH CISPLATIN IN NSCLC*

<i>Regimen</i>	<i>No. of Patients</i>	<i>No. of Trials</i>	<i>Pooled Response Rate (%)</i>
CAP	432	5	29
VDA-P	426	9	35
VP-P	384	5	29
MVP	362	7	49

* From Gralla RJ: Issues and agents in chemotherapy of non-small-cell lung cancer. *Mediguide Oncol* 5:15, 1985.

CAP = cyclophosphamide, doxorubicin, cisplatin; VDA-P = vindesine, cisplatin; VP-P = etoposide, cisplatin; MVP = mitomycin-C, vinblastine or vindesine, cisplatin

and IIIB in an attempt to better characterize a very diverse group of patients. Those patients with Stage IIIB T₄ tumors (tumors involving the mediastinum, heart, great vessels, trachea, esophagus, vertebral body or carina or having a malignant pleural effusion) are outside the realm of surgical therapy. Those patients with clinical Stage IIIA disease by virtue of radiologic or endoscopic evidence of N₂ (ipsilateral mediastinal lymph node) disease have a poor response to surgery alone although they are potentially resectable. A third category of patients are those who are discovered to have N₂ disease only after complete surgical resection. Future trials using combination chemotherapy must carefully distinguish these groups of patients.

Neoadjuvant Studies

Perhaps one of the most exciting uses of chemotherapy is in its application in the preoperative or neoadjuvant setting with or without radiotherapy, followed by attempted surgical resection. In an important study by Martini and coworkers² at the Memorial Sloan Kettering Cancer Center, 41 patients with clinical and histologically confirmed N₂ disease were treated with two or three cycles of high-dose cisplatin and either vindesine or vinblastine, with mitomycin-C added in 33 patients (MVP regimen). A major response

(complete in seven and partial in 23) was seen in 30 patients (73 percent). Twenty-eight of these patients went to surgery, and 21 underwent complete resection (70 percent of the major responders). Eight patients had no residual disease, two were downstaged to Stage I, and two were downstaged to Stage II. The overall actuarial survival was 34 percent at three years for the 41 patients who entered the trial and 54 percent for the 21 patients who underwent complete resection. This experience with MVP in Stage IIIA has been corroborated by the Toronto group (personal communication).

Faber et al³ used preoperative chemotherapy consisting of either cisplatin and 5-fluorouracil (5-FU), or cisplatin, 5-FU and VP-16 and simultaneous irradiation (4000 rads) in a neoadjuvant program for Stage III NSCLC. This group was more heterogenous as it included 18 patients with T₃N₀ disease and five patients with T₄ disease. Of 62 patients with clinical N₂ disease, 41 underwent complete resection. Eleven patients had no residual disease and 10 were downstaged to Stage I.

Enthusiasm for neoadjuvant therapy of NSCLC must remain tempered until five-year results are available. It is very important that data continue to be collected in rigorous trials. Histologic proof of IIIA status must be obtained. At MUSC we will continue to place each clinical N₂ Stage IIIA patient into a neoadjuvant trial of MVP after a careful metastatic survey and histologic confirmation of N₂ status. Major responders will undergo surgical exploration. If the tumor progresses, shows minimal response, or proves unresectable, radiation therapy will be added at increased dosage (5000-6000 rads). A hyperfractionation schedule is now being considered.

MUSC Preliminary Study

Over a two-year time period 12 patients with locally advanced NSCLC at MUSC underwent initial therapy with two or three cycles of mitomycin-C, vinblastine, and cisplatin (MVP). Our goal was to see if we could reproduce results obtained by others. The dose regimen consisted of cisplatin 120 mg/M² on days one, 29, and 57; vinblastine 3 mg/M² on days one, 15, 29, and 43; and mitomycin-C 8 mg/M² on days one, 29, and 57. All patients were

evaluated with a history and physical examination, CXR, CBC, SMA-12, bone scan if alkaline phosphatase was elevated, CT of chest and upper abdomen, CT of head, and pulmonary function tests. Following chemotherapy, those patients with Stage IIIA disease were re-evaluated for potential operability. If not operable or if surgery was refused and in those patients with Stage IIIB disease, radiation therapy was then given (4500 rads in 25 fractions) to the tumor bed and mediastinum.

There was a 50 percent major response rate in the entire group. One patient had no response, one patient had a minor response, three patients progressed on treatment, and one patient died from sepsis secondary to treatment. Four of the six patients with a major response were potentially resectable after chemotherapy and re-evaluation. Two patients underwent complete resection and the other two patients refused surgery. Toxicity remained acceptable (4+ hemotologic toxicity in two patients, 2+ in two, and 0 in eight; 3-4+ gastrointestinal toxicity in one patient, 2+ in four, 1+ in four and 0 in three; 3+ pulmonary toxicity in one patient). Although the numbers are small, we confirmed the 50 percent response rate documented by others in locally advanced NSCLC.

Postoperative Adjuvant Studies

In patients who have undergone surgical resection and are found by pathological examination to have involvement of the ipsilateral peribronchial or hilar nodes (N_1) and/or ipsilateral mediastinal nodes (N_2), the incidence of recurrent disease is high (at least 50 percent for N_1 disease and approximately 75 percent in N_2 disease). Most thoracic oncologists agree that these patients should receive additional treatment, but the optimum adjuvant therapy remains uncertain.

A report by Ferguson, et al⁴ focused on postoperative adjuvant therapy in a small group of patients with resected N_1 positive NSCLC. They compared the effect on survival of surgery alone, surgery followed by radiotherapy, and surgery followed by radiation plus chemotherapy (cyclophosphamide, doxorubicin, methotrexate and procarbazine). Survival was significantly greater for those patients receiving postoperative adjuvant therapy, especially chemotherapy.

apy, especially chemotherapy.

The Lung Cancer Study Group (LCSG) prospectively randomized patients with resected Stage II or III NSCLC to receive either postoperative immunotherapy or postoperative chemotherapy with cyclophosphamide, doxorubicin and cisplatin (CAP).⁵ Although this study would perhaps have been more meaningful if the first arm were surgery alone, other studies have indicated no survival advantage with the addition of immunotherapy. This LCSG trial showed a significant decrease in number of recurrences and cancer deaths in the chemotherapy arm.

At MUSC, we believe that the biological significance of N_1 and N_2 disease is the same; it is a marker of potential systemic spread. At the present time, patients with completely resected N_1 and N_2 disease are offered two cycles of postoperative MVP chemotherapy followed by mediastinal irradiation. Results in trials such as this await minimum five-year follow-up, assessment of toxicity, and careful documentation of sites of recurrence.

Because the brain is the most common site of recurrence in patients with completely resected NSCLC with N_1 or N_2 lymph node involvement,^{6, 7} the addition of prophylactic cranial irradiation needs to be considered in these patients. Its safety and efficacy in regionally advanced NSCLC has been recently reported.⁸

METASTATIC NSCLC

The role of chemotherapy in patients with widely disseminated NSCLC remains controversial, and certainly there is no standard of therapy. The Eastern Cooperative Oncology Group (ECOG) reported in 1986 on a prospectively randomized trial of four active regimens for metastatic NSCLC.⁹ These results are summarized in Table III. In general, response rates were 20 to 35 percent and were associated with a survival time of five to six months, although it should be noted that the unexpectedly poor results with the MVP regimen may reflect the use of a low cisplatin dose (40 mg/m²) in that arm of the trial. Almost all studies show that performance status is a major determinant of response to chemotherapy and survival. Response itself is an important prognostic factor.

TABLE III
COMBINATION CHEMOTHERAPY
IN METASTATIC NSCLS*

<i>Regimen</i>	<i>No. of Patients</i>	<i>Major Response Rate (%)</i>	<i>Survival (Months)</i>
CAMP	115	17.0	6.25
MVP	121	31.0	5.5
VP-P	124	20.0	6.5
VDA-P	126	25.0	6.5

* Ref. 9.

CAMP = cyclophosphamide, doxorubicin, methotrexate, procarbazine; MVP = mitomycin-C, vinblastine, cisplatin; VP-P = etoposide, cisplatin; VDA-P = vindesine, cisplatin

In any chemotherapy regimen toxicity and cost are important considerations. In our opinion, outpatient regimens are preferable.

The issue of benefit is real and must continue to be carefully analyzed. In a randomized trial undertaken by the National Cancer Institute of Canada, two chemotherapy regimens [cyclophosphamide/doxorubicin/cisplatin (CAP) and vindesine/cisplatin (VDA-P)] were compared to best supportive care.¹⁰ Median survival was significantly longer for the chemotherapy arms (CAP = 24.7 weeks, VDA-P = 32.6 weeks) than for best supportive care (17 weeks). One-year survivors were 21 percent in the CAP arm and 22 percent in the VDA-P arm compared to 10 percent of those receiving best supportive care. The differences in cost among these three regimens were not significant.

New Drugs

More effective single agents for the treatment of NSCLC and better drug combinations await discovery. A promising new agent is 10-ethyl-10-deaza-aminopterin (10-EdAM), a classic antifolate metabolite. Administration of 10-EdAM at a dose of 80 mg/M² weekly produced a major response rate of 32 percent in patients with advanced NSCLC.¹¹ Stomatitis was the dose-limiting toxicity. When 10-EdAM was substituted for cisplatin and combined with mitomycin-C and vinblastine, a

major response rate of 59 percent was achieved in 59 patients with advanced disease (69 percent Stage IV). Two-thirds of the patients never required hospitalization and 53 percent of the patients were alive at 12 months (personal communication).

As molecular biology continues to advance and provide us new insights into the basic mechanisms of tumor expression, other pharmaceutical tools should emerge. The ability to test each patient's tumor in vitro against a battery of chemotherapeutic agents would help us to choose therapy to fit each patient and maximize potential response. In the meantime, new drugs and combinations should be tested in rigorous clinical trials that determine response rate, response duration, survival, and toxicity.

MUSC Participating in Multicenter Trial

As a meaningful step toward assessing the role of combination chemotherapy in advanced NSCLC, MUSC will participate in a multicenter trial comparing the combination of 10-EdAM, mitomycin-C and vinblastine (EMV) with the combination of mitomycin-C and vinblastine (MV). We will solicit entry of Stage IIIB and Stage IV patients after consideration of each case by a multidisciplinary thoracic tumor board. Both arms are outpatient regimens, and patients will only be accepted if their Karnofsky performance status is ≥ 60 percent (requiring only occasional assistance). Accrual of patients will begin in January, 1990.

CONCLUSION

Lung cancer treatment may be at the stage where breast cancer treatment was many years ago, before we learned the circumstances under which chemotherapy may prolong patients' overall and disease-free survival. It is only through supporting well-designed studies and remaining open-minded that progress will be made. With the caveat that the patient and his or her quality of life must come first, participation in such studies should be considered and discussed when the diagnosis of non-small-cell lung cancer is made. □

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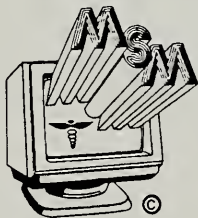
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HUMAN PAPILLOMAVIRUSES AND CERVICAL CANCER

LUCIA A. PIRISI, M.D.*

Human Papillomaviruses (HPV) are small DNA viruses which infect skin and mucosae producing benign tumors classified as warts or condylomata. More than 60 different HPV types have been identified to date.¹ Their classification is based on the properties of the viral DNA and the degree of homology with known HPV types. A new isolate is classified as a subtype of a known HPV type if homology between the two is 50 percent or more, and as a new HPV type if homology is less than 50 percent.² As summarized in Table I, different HPV types infect different tissues and produce lesions with different malignant potential.¹⁻⁶ The possibility that HPV play a role in the genesis of various types of human cancer was first suggested by H. zur Hausen in 1977.⁷ Since then, epidemiological studies have produced data which support this hypothesis. In particular, specific HPV types are closely associated with cervical cancer: according to some studies up to 80 percent of the cases of cervical neoplastic and preneoplastic lesions (cervical intraepithelial neoplasia, CIN, of various grades) harbor some type of HPV. Among these, HPV16 is present in about 50 percent of the cases, HPV18 in 20 percent, and other HPV types are present in the remaining cases.⁸ HPV infection of the genital area is sexually transmitted. In recent times an increasingly high incidence of genital HPV infection has been observed in normal women, particularly in Europe. This has been attributed in part to more sensitive methods of detection of HPV infection, and in part represents a real increase in the rate of transmission. In fact, the highest incidence of HPV infection is observed in younger, sexually active women. In addition, signs of HPV infection in very young children, due to perinatal transmission of these viruses, have been demonstrated in some cases.⁹ Perinatal transmission of HPV is particularly

important for the genesis of laryngeal papillomas, a relatively rare but serious HPV11-induced disease which affects prevalently young people.⁹ In summary, HPV infection is widely distributed, can be transmitted not only to sexual partners but also to children, and is likely to affect growing numbers of people.

Epidemiological data alone are not sufficient to assess the role of HPV in cervical cancer, since many different factors influence the development of cancer *in vivo*, and a direct cause-effect relationship for any single carcinogenic agent is hard to assess in patients. HPV cannot be cultured *in vitro*, because viral replication and the production of viral particles require a specific differentiative state of the host cell, which cannot be obtained in the most common cell culture systems. Furthermore, it is difficult to isolate complete virions for most of the HPV types associated with malignant lesions, because these lesions produce very low amounts of viral particles, and viral DNA is invariably integrated into the cellular genome by the time an HPV-induced lesion has evolved to cancer. In fact, most of the potentially carcinogenic HPV types have been isolated as viral DNA, not as complete virions. Recombinant DNA technology, however, has allowed us to isolate, subclone, and propagate the DNA of these viruses. Transfection of HPV DNA into human cells has made it possible to study the effects of the presence of viral DNA into these cells, even when the complete virion was not available. Since transformation is ultimately due to the interaction between viral and cellular DNA, *in vitro* model systems which employ transfected viral DNA and human epithelial cells are suitable for studying the carcinogenic potential of these viruses, even though mechanisms of infection and viral production cannot obviously be studied in these systems. Both human foreskin keratinocytes and human cervical epithelial cells have been used in these studies, in a variety of culture systems, in a number of laboratories.¹⁰⁻¹⁵ The

* Department of Pathology, University of South Carolina School of Medicine, Columbia, S. C. 29208.

TABLE I.
Some HPV Types and Their Association With Human Lesions

<i>HPV Type</i>	<i>Disease Association</i>	<i>Oncogenic Potential</i>
1	common warts	benign
2	common warts	rarely malignant
3, 4	common warts, juvenile warts	mostly benign
5	macular lesions in ev (epidermodysplasia verruciformis)	highly malignant
6	condyloma acuminatum	benign
7	common warts of meat handlers	benign
8	macular lesions in ev	highly malignant
9	macular lesions in ev	benign
10	flat warts, rarely condylomata	rarely malignant
11	condyloma acuminatum low grade cervical dysplasia laryngeal papillomas conjunctival papillomas	rarely malignant
12-13	ev	benign
14	ev	rarely malignant
15	ev	benign
16	low and high grade cervical dysplasia cervical carcinoma bowenoid papulosis Bowen's disease	malignant
17	ev	rarely malignant
18	cervical dysplasia cervical cancer	malignant
19-25	ev	benign, or rarely m.
26-29	warts	benign
30	exophytic condyloma (detected in laryngeal carcinoma)	malignant
31	mild cervical dysplasia	rarely malignant
33	cervical intraepithelial neoplasia	malignant

HPV types which are closely associated with cervical malignancies (HPV16, HPV18, HPV31, HPV33) cause invariably "immortalization" of human epithelial cells *in vitro*. In other words, human epithelial cells, which can normally be propagated in culture for no more than four to five passages (about two months), when transfected with the DNA from these HPV types can be propagated for years. For example, in our laboratory none of the human epithelial cell lines established by transfection with HPV16 died so far (the oldest lines have been in culture for more than four years). We could also demonstrate that immortalization by HPV16 is a direct consequence of the presence and expression of viral sequences in these

cells, and occurs independently of any specific genetic characteristic of the host cells.¹¹ It is of interest to observe that HPV types which are not associated with malignant lesions failed to immortalize human epithelial cells *in vitro*.¹⁵ With time in culture, HPV16-immortalized human cells acquired other characteristics typical of transformed cells, such as the ability to produce their own growth factors, and the lack of response to stimuli that induce terminal differentiation in normal cells.¹¹ Although these properties are important components of the phenotype of cancer cells, we failed to demonstrate tumorigenicity of HPV-immortalized human cells injected in nude mice. However it has been recently demonstrated that these cells

become tumorigenic when subjected to a second transforming agent, such as an activated ras oncogene.¹⁶ Several laboratories are now investigating this process in detail: the viral genes responsible for immortalization have been identified,^{17, 18} and it has been possible to demonstrate that their continuous expression in transformed cells is required to maintain continuous growth. The same viral genes are constantly maintained and expressed in human tumors which harbor HPV.^{19, 20} Recently special culture systems have been established, which allow for the "reproduction" of a pluristratified epithelium *in vitro* by cultured human epithelial cells, and more closely mimic the architecture of a human epithelium. In these systems it has been possible to demonstrate that HPV induce specific alterations of the epithelial morphology which closely resemble the morphological features of CIN.²¹

The data summarized above suggest the following interpretation for a role of HPV in human cervical cancer: HPV are not the only cause of cervical cancer; however, they can play a decisive role by producing a population of cells with altered growth and differentiation properties, which may be an easy target for further transformation by other carcinogenic agents of various origin and nature. These agents may act by activating cellular oncogenes (i.e. ras) or may carry their own oncogenes (i.e. other DNA viruses) and contribute to the progression of HPV-infected cells to malignancy. Again, epidemiological data support this interpretation: in fact, the latency of cancer in women infected with HPV is long, and only a small percentage of women infected with one of the "carcinogenic" HPV types will eventually develop cervical cancer.¹ Also, only a fraction of the lower grade CIN lesions, although considered potentially premalignant, will in fact evolve into cancer; many of these lesions will in fact regress.²² These observations are in complete agreement with the concept, unequivocally established in experimental systems, that cancer is a disease which develops in many steps and requires many different factors.²³

Under a practical point of view, to control HPV infection ultimately means to reduce a risk factor for cervical cancer. We can reasonably assume that women which present infec-

tion with one of the "carcinogenic" HPV types (HPV16, HPV18, HPV31, etc.) are at higher risk of developing premalignant lesions. It is therefore desirable to know if HPV infection is present in all women which routinely are screened for cervical cancer.

Someone could argue: We cannot treat HPV infection yet, and women with high grade premalignant lesions are going to be treated anyway, so what is the usefulness of knowing if they have HPV or not? The answer to this question is severalfold:

1. Women with normal Pap smear are currently advised to repeat the exam after one to two years. In the presence of HPV infection, the exams could be repeated more frequently, and therefore premalignant lesions, which are likely to occur in these women more frequently than in the HPV-negative population, could be discovered and treated at early stages.

2. Precautions could be taken by people with active HPV infection to avoid transmission of these viruses to sexual partners, as well as perinatal transmission to children.

3. In order to assess the role of HPV as risk factors in cervical cancer for a specific geographical area, we need more epidemiologic data. The geographical distribution of HPV types varies greatly in different countries. Currently no data are available concerning the incidence of HPV infection and distribution of various HPV types in South Carolina, which has a high incidence of cervical cancer. We do not know whether this is associated with a high incidence of HPV infection in the South Carolina population, or other factors are more important.

4. Detection of HPV is currently possible in both cervical smears, and surgical specimens. However, current methods of detection are based mostly on DNA hybridization, and screening of a large number of specimens is time-consuming and costly. A large effort, both by pharmaceutical companies and by researchers at different institutions is being devoted to the collection of data concerning the distribution of HPV infection in different geographical areas, as well as to the design and testing of improved methods of detection, more suitable for routine large-scale use. The establishment of these methods also requires the analysis of large numbers of specimens.

In conclusion, there are many good reasons for looking at the incidence and distribution of HPV infection in a population in which cervical cancer is present with high frequency. A major focus of a collaborative research program between our laboratory and the Department of Obstetrics and Gynecology at the University of South Carolina School of Medicine is the development of a comprehensive study of HPV infection in South Carolina, and how it correlates with cervical cancer in this geographical area. □

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CHANGING BREAST BIOPSY CONCEPTS*

HENRY P. LEIS, JR., M.D.

Just like concepts regarding appropriate therapy for women with breast cancer have changed dramatically since the early seventies, so have those regarding appropriate diagnostic biopsy methods.^{1, 2} There has been an increasing number of diagnostic biopsies, especially for small clinically detected lesions, and for occult ones found by mammography. This is the result of more asymptomatic women following the guidelines recommended by the American Cancer Society for breast examinations, both self and health professional, and for mammography.³ Modern women have demanded biopsy procedures that result in a minimal amount of deformity to their breast. They also want to avoid hospitalization and general anesthesia whenever possible, a view that is strongly supported by the insurance carriers who are anxious to reduce costs as well.

Informal needle biopsies, rather than formal incisional or excisional ones, have become increasingly popular since the early seventies. Fine needle aspiration of cysts has become a routine procedure, avoiding many of the unnecessary formal biopsies of the past.⁴ The author has a 30-year follow-up on 2,213 patients treated for gross cystic disease by aspiration. There was an increased incidence of cancer of 2.4 times the expected number. This does not mean that gross cysts are precancerous but rather that a certain percentage of the patients had lobular or ductular epithelial hyperplasia with marked atypia in other parts of their breast. Gross cysts were reported as not being precancerous in the Consensus Meeting of the Cancer Committee of the College of American Pathologists.⁵

When a cyst is aspirated the fluid should not be hemorrhagic, there should be no residual

mass and the mammogram should be negative. Otherwise a formal biopsy should be performed. Although the aspiration of cysts is now a well accepted procedure there does not seem to be any general agreement as to whether the aspirated fluid should be discarded or submitted for cytologic examination. Routine cytology or even cell block studies, while of great reassurance to the patient, are seldom rewarding if the fluid is not hemorrhagic. The author did combined cytologic and cell block studies on the fluid from 1,710 aspirated cysts in which the fluid was thin, turbid, smoky, yellow or greenish. Formal biopsies were recommended in 27 patients because of abnormal cells but only two had intracystic carcinomas. Another disadvantage to just aspirating cysts is the high percentage of recurrences. Care must be taken to be sure that all the fluid is aspirated from the cyst and a pressure dressing should be applied for 24 hours. Pneumocystography, the injection of air after a cyst is aspirated, and doing a mammogram after this, has, in the author's experience, dramatically reduced recurrences and it can occasionally show abnormalities in the cyst wall indicating a need for biopsy.

Recently informal biopsies of solid tumors, i.e., fine needle aspiration and needle core biopsies, have become increasingly popular in the office and clinic enabling the physician to tell the patient her probable diagnosis quickly. However, a false negative means nothing since the lesion could have been missed and, although rare, false positives do occur. Before doing definitive surgery I advise a formal biopsy to negate the possibility of a false positive and to determine parameters as to the aggressiveness of the tumor so that the most appropriate therapy can be selected.

The author has performed fine needle aspirations with cytologic examination on 1,513 solid tumors between 1976 and 1985. All patients subsequently underwent formal biopsies for confirmation of the diagnosis. There were 711 primary breast cancers. Cytologic examination was indicative of cancer or suspicious

* From the University of South Carolina School of Medicine, Breast Center, Columbia, S. C., and New York Medical College, Institute of Breast Diseases, Valhalla, New York. Address correspondence to Dr. Leis at 113 11th Avenue North, The Pines, North Myrtle Beach, S. C. 29582.

for cancer in 649 cases or 91.2 percent. There were three false positives. These findings correspond to reports from other studies.⁶

Fine needle aspiration biopsies offer only a cytologic diagnosis. In an analysis of fine needle aspirations by flow cytometry Palmer et al⁷ reported that cancers produced aneuploid GOGI peaks while benign tumors did not, offering a method for complementing the diagnostic acuity of cytology. Needle core biopsies require a drop of local anesthesia and a small puncture wound in the skin but they offer a histologic diagnosis with more information regarding the aggressive nature of the tumor including estrogen and progesterone receptor determinations by radioimmune assays.

In 1974 in the United States, formal biopsies, i.e., incisional or excisional depending on the size and type of the lesions, were routinely done as one-step or full consent procedures, with permission for definitive surgery based on frozen section histologic examination, under general anesthesia on an in-patient basis. The use of this one-step procedure steadily declined over the next five to six years. Now, in the United States, stimulated by the advice of the NIH Consensus Conference on the Primary Treatment of Breast Cancer and modern women's demands, biopsies are usually done as two-step or limited consent procedures, with removal of the lesion only, under local anesthesia, on an out-patient basis, or if under general anesthesia, then on an ambulatory care basis discharging the patient the same day as the surgery.

The advantages of the two-step procedure, for most patients, are well recognized. It allows for detailed histologic evaluation of multiple permanent sections and for consultative pathologic opinions if needed. It negates the possibility of a false positive frozen section diagnosis and the need to discuss definitive therapeutic options with the patient until the diagnosis is firmly established. Finally, it allows the patient a better opportunity to consider various options, to have consultative or

second opinions if so desired, and to give a much more knowledgeable informed consent. There is no statistically valid evidence to show that a delay of 10 to 14 days deleteriously influences the survival of the patient.

When an occult lesion is found on mammography that is too small to be palpated, then needle localization, with or without dye injection, based on mammograms taken in two projections, is the best technique so that the biopsy can be done with a minimal amount of deformity to the breast. The biopsy specimen must always be mammographed to be sure the area of concern is on it.⁸ The use of stereotatic fine needle aspiration cytology of a nonpalpable mammographically detected lesion as an aid in establishing diagnosis is currently under study with recent reports indicating a high sensitivity for diagnosing cancer.^{9, 10} □

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Don't Smoke Yourself To Death.

CALCIUM LEUCOVORIN AND 5-FLUOROURIDINE CYTOTOXICITY*

SONDRA H. BERGER, PH.D.

MAIRE T. HAKALA, PH.D.

INTRODUCTION

Cytotoxicity resulting from treatment with the fluoropyrimidine (FP) drug, 5-fluorouracil (FUra), is associated with drug action at two cellular sites: RNA and the enzyme, thymidylate synthase (TS).¹ Recent clinical investigations have revealed that the TS-directed action may be of chemotherapeutic advantage. Thus, attempts to modulate FUra action by increasing the RNA-directed effects have been associated with increased toxicity without accompanying therapeutic benefit.² In contrast, a significant improvement in objective response is reported in patients with carcinoma receiving FUra in combination with agents such as calcium leucovorin (citrovorum factor, CF) that increase TS-directed cytotoxicity.³ In fact, the inclusion of CF in the protocol is associated with objective response in some patients initially unresponsive to FUra.³ CF is thought to increase the action of FUra at TS by elevating the intracellular pool of reduced folates, which, in turn, stimulate the binding of the FP metabolite, 5-fluorodeoxyuridylate (FdUMP), to TS.⁴ The binding of FdUMP and the reduced folate, 5,10-methylenetetrahydrofolate ($\text{CH}_2\text{H}_4\text{PteGlu}$), to TS precludes enzyme activity, resulting in dTMP deprivation and cessation of DNA biosynthesis.¹

While FUra is the major FP drug utilized clinically, it produces less cytotoxicity in pre-clinical models than the FP drugs, 5-fluorodeoxyuridine (FdUrd) and 5-fluorouridine (FUrd).¹ The clinical utility of FdUrd is limited to regional therapy of hepatic metastases wherein the drug is infused directly to the tumor site.⁵ Although TS is the major target of FdUrd and FUrd is 50- to 1,000-fold more

cytotoxic than FUra in tumor cells in culture,¹ clinical utilization of this drug is restricted due to its rapid hydrolysis to FUra *in vivo*.⁶ Severe toxicity has limited the clinical utility of FUrd.⁷ The toxicity is associated with the pronounced RNA-directed effects of this FP drug.¹ Approaches have been designed to circumvent the instability of FdUrd, with the goal of increasing its clinical utility.⁸ Thus far, approaches to reduce or alter the systemic toxicity of FUrd have not been forthcoming.

In-depth investigations of the actions of FP drugs and of CF modulation of FP action have been conducted in the human laryngeal carcinoma cell line HEP-2.⁹⁻¹² In these cells, CF alters the site of FUra action from RNA to TS and increases FUra cytotoxicity.¹¹ In addition, CF increases the cytotoxicity of FdUrd; the site of FdUrd action is TS regardless of the presence of CF.¹¹ The effect of CF on the site of action and cytotoxicity of FUrd has not been reported in these cells. Since CF has been shown to alter the site of FUra action in HEP-2 cells and to increase the therapeutic activity of FUra in the clinic, it is possible that CF may modify the site of FUrd action and thus impact upon FUrd systemic toxicity. This possibility has been investigated by utilizing the HEP-2 cell line as a model system.

MATERIALS AND METHODS

Materials

[6-³H] FdUMP (18 Ci/mmol) was purchased from Moravsek Biochemicals, City of Industry, CA. [5-³H] dUMP (14 Ci/mmol) was purchased from Schwarz-Mann, Orangeburg, NY. [¹⁴C]-Formaldehyde (56 Ci/mmol) was obtained from New England Nuclear, Boston, MA. FUrd, FdUMP, dUMP, dThd, CF, acid-washed charcoal, DEAE-cellulose microgranular anion exchanger, and phosphocellulose were purchased from Sigma

* From the College of Pharmacy, Department of Basic Pharmaceutical Sciences, University of South Carolina, Columbia, S. C. 29208. Address correspondence to Dr. Berger.

Biochemicals, St. Louis, MO. Dextran T-70 was obtained from Pharmacia Fine Chemicals, Piscataway, NJ. Horse serum and powdered RPMI 1640 medium were from Grand Island Biological Co., Grand Island, NY.

The synthesis and purification of (R,S) $\text{CH}_2\text{H}_4\text{PteGlu}$ has been described previously.¹² *Lactobacillus casei* TS was partially purified as described previously.¹²

Cell Culture

The origin and maintenance of human laryngeal carcinoma HEp-2 and the FdUrd-resistant HEp-2/500 subline have been described.^{13, 14} Cells were grown in monolayer in RPMI 1640 supplemented with five percent horse serum.

Growth Inhibition Studies

These were carried out using cells in monolayer in T-15 flasks as described previously.¹⁰ Briefly, cells were exposed for three hours to FUr, then grown for five to six days in drug-free medium. Cell growth was measured by protein determination as described previously.¹⁰ Rescue experiments with dThd have been described previously.¹⁰ Briefly, cells exposed to FUr for three hours were grown five to six days in drug-free medium supplemented with $30\text{ }\mu\text{M}$ dThd. Cell growth was determined as described above. Studies on the effect of CF on growth inhibition by FUr were conducted as described previously.¹¹ Briefly, cells were incubated with CF for 24 hours prior to three-hour treatment with CF and FUr. After drug exposure, the cells were allowed to grow for five to six days in drug-free medium. Growth was assessed as described above.

Analysis of dUMP and FdUMP Levels

Confluent monolayers of cells in T-75 flasks were incubated with various concentrations of FUr for three hours. After medium removal, the acid-soluble nucleotides were extracted, separated into dUMP and FdUMP fractions by DEAE-cellulose chromatography, and the nucleotide levels quantitated using *Lactobacillus casei* TS as described previously.¹² Briefly, dUMP was quantitated in an endpoint catalytic assay as the amount of [^{14}C]dTMP synthesized from [^{14}C] $\text{CH}_2\text{H}_4\text{PteGlu}$ and FdUMP was quantitated in a radioligand binding assay utilizing [$6\text{-}^3\text{H}$] FdUMP and

$\text{CH}_2\text{H}_4\text{PteGlu}$. Calculation of the molarity of the nucleotides from intracellular water data has been described previously.¹⁰

TS Activity Assay

Cells in late exponential phase were incubated for three hours with various concentrations of FUr. After medium removal, enzyme activity was measured in $100,000 \times \text{g}$ cell extracts utilizing [$5\text{-}^3\text{H}$]dUMP and $\text{CH}_2\text{H}_4\text{PteGlu}$ as described previously;¹⁰ TS activity is expressed in pmoles of dTMP synthesized per minute per mg protein.

RESULTS

Growth Inhibition by FUr

The effect of three-hour exposure to FUr on cell growth is shown in Figure 1. The concentration required to inhibit growth by 50 percent (ID_{50}) was $0.71\text{ }\mu\text{M}$. Since dThd can rescue cells from growth inhibition resulting from TS-directed action, dThd rescue experiments indicate whether TS is the growth-limiting site of action of FUr. As is shown in Figure 1, HEp-2 cells were not rescued from FUr cytotoxicity by dThd; thus, TS is not the growth-limiting target in HEp-2 after FUr. In order to verify that TS is not the growth-limiting target, growth studies were conducted with HEp-2/500 cells that overexpress TS by 100-fold relative to HEp-2 parental cells.¹⁴ Since TS is present in excess in this subline, these cells are resistant to TS-directed drugs. The response of HEp-2 and HEp-2/500 cells to FUr

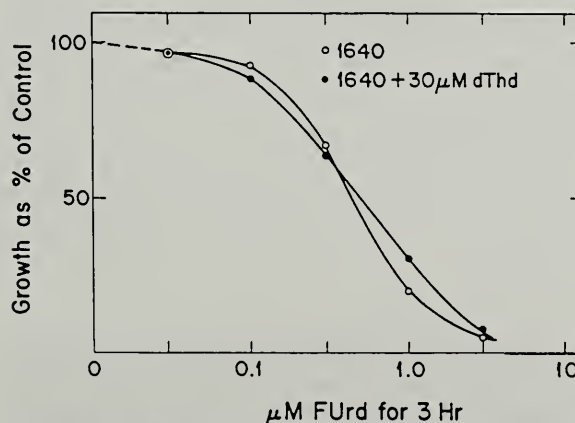


FIGURE 1. RESCUE OF HEp-2 CELLS WITH $30\text{ }\mu\text{M}$ dThd.—Cells in monolayer were incubated for three hours with various concentrations of FUr. After medium removal, the cells were grown with (●) or without (○) dThd for five or six days.

TABLE I. Effect of CF on the Growth Response to FUrD.

Incubation Medium ^a	Growth Medium ^b	FUrD ID ₅₀ (μ M)
1640	1640	0.36 (2) ^c
	Rescue Medium	0.40 (2)
1640 + 10 μ M CF	1640	0.36 (2)
	Rescue Medium	0.55
1640 + 300 μ M CF	1640	0.24
	Rescue Medium	0.48

^aAfter 24-hour incubation in the medium indicated, the cells were exposed for three hours to various concentrations of FUrD in the same medium.

^bThe incubation medium was removed and cell layers were rinsed and grown in the medium indicated. Rescue medium was 1640 supplemented with 30 μ M dThd.

^cThe numbers in parenthesis indicate the number of separate experiments, each in triplicate.

was similar (data not shown). These data substantiate the dThd rescue experiments and reveal that TS is not the site of FUrD action.

CF at 10 μ M concentration has been shown to alter the growth-limiting target of FUrA in HEP-2 cells from RNA to TS;¹¹ thus, HEP-2 cells were exposed to FUrD in the presence of 10 and 300 μ M CF. As is shown in Table I, CF had essentially no effect on the ID₅₀ of FUrD. Cells exposed to CF and FUrD were only slightly rescued with dThd.

FdUMP Levels After FUrD

Since TS is not the growth-limiting target of FUrD, even in the presence of CF, HEP-2 cells may not convert FUrD to FdUMP, the FP metabolite that directly inhibits TS. The formation of FdUMP after FUrD exposure was determined in the cells. As is shown in Figure 2 (left panel), FdUMP pools increased in direct proportion to the FUrD concentration. At the ID₅₀ for growth inhibition, the intracellular levels of FdUMP were 2.1 μ M. These levels are similar to the FdUMP levels present in HEP-2 cells at the ID₅₀ for growth inhibition of FUrA.¹²

Inhibition of TS

The growth studies reveal that TS is not the growth-limiting site of FUrD action, even though FdUMP is formed. Thus, the effect of FUrD on inhibition of TS was measured to determine whether TS is a target of this FP drug. As shown in Figure 3, TS is a target of FUrD; in fact, 90 percent of the enzyme is

inhibited at 0.3 μ M, a concentration of FUrD less than that required for 50 percent reduction in cell growth.

Accumulation of dUMP, the substrate of TS, has been observed in FP-treated cells^{12, 15} and is presumed to reflect reduced utilization of dUMP when TS is inhibited. An inverse correlation between the extent of TS inhibition and dUMP pool expansion has been observed in HEP-2 cells after FUrA.¹² As is shown in Figure 2 (right panel), dUMP pools increased in cells exposed to increasing FUrD concentrations. Comparison of Figures 2 and 3 reveals that the levels of dUMP are inversely related to the levels of TS activity remaining after FUrD exposure. At the ID₅₀ for growth inhibition, the dUMP pools are elevated to 150 μ M from a baseline level of 7.6 μ M, clearly indicating that TS is significantly inhibited at concentrations of FUrD resulting in cytotoxicity.

DISCUSSION

In HEP-2 cells, CF is unable to direct FUrD action at TS. This is surprising, in view of the capacity of these cells to synthesize FdUMP and to undergo TS inhibition in a dose-dependent manner after FUrD. The lack of response to CF suggests that effects other than TS inhibition underlie the cytotoxicity to FUrD. Thus, the cell insult may be so pervasive that CF, which increases the reduced folate pools and thus maximizes the TS-directed effects of FdUMP, is unable to modify the growth-limiting event. Alternatively, TS inhibition may be

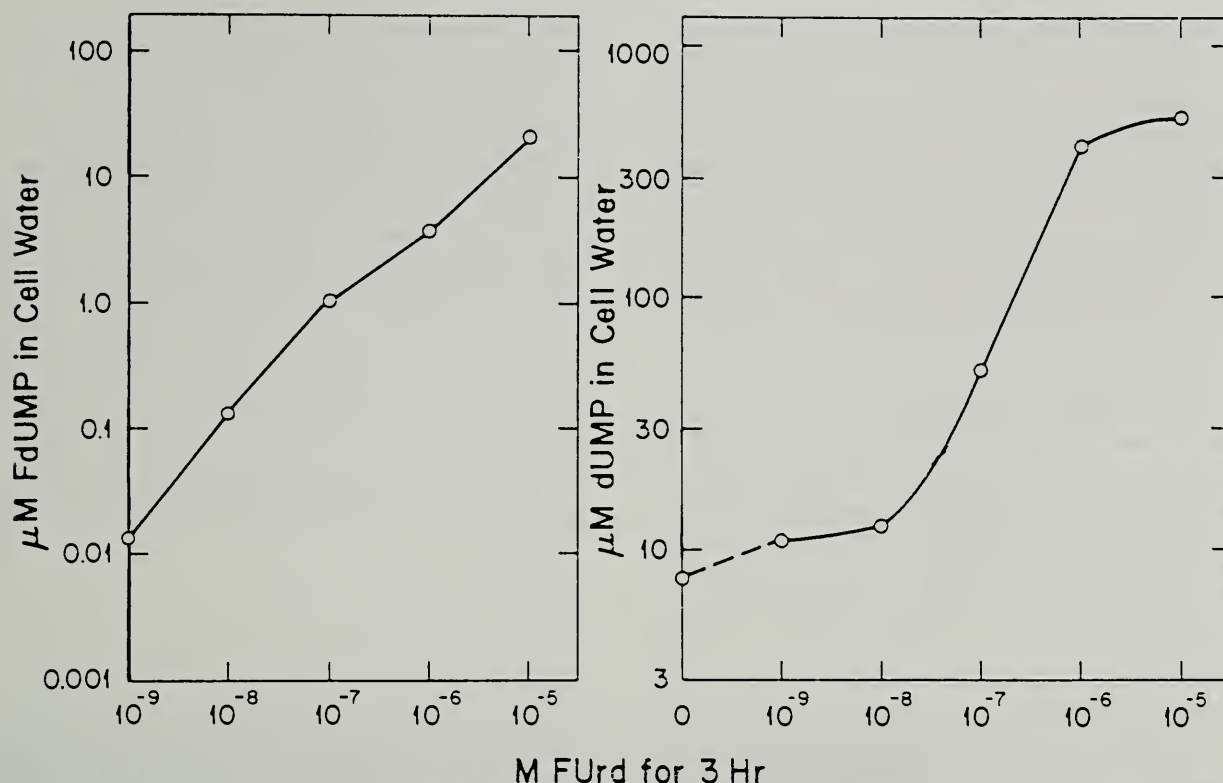


FIGURE 2. CELLULAR POOLS OF dUMP AND FREE FdUMP AFTER FURd.—Monolayers of cells were incubated for three hours with various concentrations of FURd and the acid-soluble pools analyzed as described in Methods. The points represent the mean values of two to five separate determinations.

impeded by FURd-induced alteration in cell metabolism.

It is likely that the growth-limiting site of FURd action is RNA. This is a reflection of two properties of HEP-2 cells exposed to FURd: HEP-2 cells rapidly accumulate FURd intracellularly; the FURd is converted to 5-fluorouridine-5'-triphosphate (FUTP), which comprises 90 percent of the total intracellular FP pools in these cells after three-hour drug exposure (R.M. Evans and M.T. Hakala, unpublished results). The high levels of FUTP stimulate the incorporation of fluorinated analog into RNA, resulting in the formation of fraudulent RNA molecules that impact upon cell viability. CF can maximize the action of FdUMP but pools of this FP metabolite represent only 10 percent of the total FP metabolites. Thus, CF is unable to alter the site of FURd action from RNA.

An alternative explanation for the lack of modulation by CF is that cellular events prevent maximal inhibition of TS after FURd. It has been suggested that the accumulation of dUMP may interfere with the binding of FdUMP to TS.¹⁵ It is clear that dUMP accu-

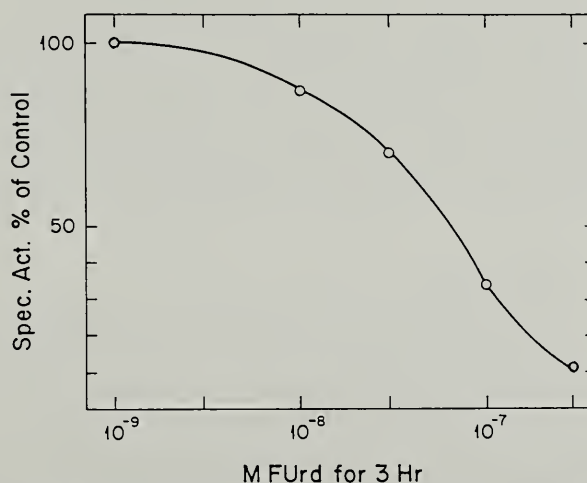


FIGURE 3. TS ACTIVITY AFTER FURd.—Cells in monolayer were exposed to various concentrations of FURd for three hours. Cell pellets and extracts were prepared and analyzed for TS as described in Methods. The activities are expressed in pmole/min/mg prot and the results are presented as percent of untreated control activity. The level of TS in drug-free controls is 109 ± 33 pmole/min/mg prot. The points represent the average of two separate determinations.

modulates in HEP-2 cells after FUrD; however, it is unlikely that expansion of the pools of this nucleotide precludes TS as the growth-limiting target of FUrD. The dUMP/FdUMP ratio is actually lower after FUrD than after FUra or FdUrD (S.H. Berger and M.T. Hakala, unpublished results); the actions of FUra and FdUrD are modulated by CF. Thus, competition for nucleotide binding sites on TS does not appear to account for the lack of FUrD modulation by CF.

Of the three FP drugs, FUrD is the most cytotoxic in HEP-2 cells. It is sevenfold more potent than FdUrD and 340-fold more potent than FUra.^{10, 11} This pronounced cytotoxicity, related to RNA-directed effects, probably underlies the systemic toxicity and precludes the utilization of this drug clinically. The pronounced systemic toxicity of FUrD is discouraging, in view of the likelihood that FUrD is more stable than FdUrD in human tissues.¹⁶ These studies indicate that the inclusion of CF does not alter the growth-limiting target and, hence, will not reduce the systemic toxicity of this drug. Since FUrD serves as a precursor of FdUMP, it would appear to be a candidate for CF modulation; however, realization of this possibility requires that the FUTP pools be reduced. An agent such as galactosamine may provide the necessary FUTP depletion mechanism.¹⁷ By diverting the pools of FUTP to FUDP-sugars, this agent could reduce the RNA-directed effects of FUrD. This, in turn, could allow CF to optimize the TS-directed effects of FUrD. The effects of galactosamine and CF in combination with FUrD are being examined in the HEP-2 model system.

SUMMARY

The action of fluoropyrimidine (FP) drugs at thymidylate synthase (TS) is associated with enhanced chemotherapeutic response. Calcium leucovorin (CF) increases the cytotoxicity of the FP drugs, 5-fluorouracil and 5-fluorodeoxyuridine, in human laryngeal carcinoma HEP-2 cells by directing the action of these drugs at TS. Thus, the effect of CF on the cytotoxicity and site of action of the FP, 5-fluorouridine (FUrD), was investigated in HEP-2 cells. The cytotoxicity of FUrD was unaffected by CF. Moreover, CF was unable to

alter the growth-limiting target of FUrD to TS. HEP-2 cells convert FUrD to FdUMP, the FP metabolite that is the direct inhibitor of TS; thus, the inability of CF to modulate FUrD action is not due to lack of inhibitor formation. In addition, greater than 90 percent of TS activity is inhibited at concentrations of FUrD that inhibit HEP-2 cell growth by 50 percent. Thus, while TS is significantly inhibited by FUrD, it is not the growth-limiting target of this drug. It is likely that the RNA-directed effects of FUrD are so extensive that CF, which maximizes TS-directed action, is ineffective at reducing the cytotoxicity further. An approach to overcoming the RNA-directed effects of FUrD is suggested. □

ABBREVIATIONS

FP, fluoropyrimidine; FUra, 5-fluorouracil; RNA, ribonucleic acid; TS, thymidylate synthase; CF, calcium leucovorin, citrovorum factor, folinic acid; FdUMP, 5-fluorodeoxyuridylate; $\text{CH}_2\text{H}_4\text{PteGlu}$, 5,10-methylene-tetrahydrofolate; dTMP, thymidylate; FdUrD, 5-fluorodeoxyuridine; FUrD, 5-fluorouridine; dThd, thymidine; ID_{50} , the concentration of drug required to inhibit cell growth by 50 percent compared to control growth; FUTP, 5-fluorouridine-5'-triphosphate.

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THE STATE OF THE ART IN PEDIATRIC SURGERY AND PEDIATRIC ONCOLOGY AT MUSC CHILDREN'S HOSPITAL*

H. BIEMANN OTHERSEN, JR., M.D.
C. D. SMITH, M.D.
JOSEPH LAVER, M.D.
SAMUEL MORGAN, M.D.
MIQUEL ABBOUD
A. JULIAN GARVIN, M.D.

PEDIATRIC SURGERY

Pediatric Surgery as a specialty in South Carolina began in 1965 as a part of the Department of General Surgery at the Medical University of South Carolina (MUSC). Full divisional status was attained in 1976. Since then with the construction of the MUSC Children's Hospital, significant steps have been taken to improve the surgical and oncologic care of children. As we enter the last decade of this century it is appropriate to highlight some of the areas where recent therapeutic advances have occurred.

Burns

The treatment of burns in children has improved within the last 10 to 15 years. First silver nitrate and then sulfamylon aided in local control of burn wound sepsis. Silver sulfadiazine is now the preferred topical agent in children. Aggressive tangential excision with early grafting has resulted in a decreased hospital stay and less functional disability. The whole child and his family must be involved in therapy and thus the burn team at the Children's Hospital includes, in addition to pediatric surgeons, a pediatric burn nurse; physical therapist; occupational therapist; social worker; pediatric psychiatrist; and nutritionist.

The latest development in burn care is the utilization of cultured skin autografts. Both the

adult and children's burn unit of MUSC are participating in a clinical study of the use of cultured autografts. In essence, small biopsies of skin are taken from the axillae and groins of seriously burned children and sent in culture medium to a laboratory in Cambridge, Massachusetts. There a commercial firm (BioSurface Technology, Inc.) separates the specimen into single cell suspensions and cultures the skin in vitro. Rapid growth occurs across the bottom of culture flasks and in three weeks multiple flasks can be harvested by releasing the cells from the flasks and attaching the skin specimen to gauze squares. The graft measures approximately 25 square centimeters and will take well if the underlying tissue bed is ready. In some areas, cosmetic results may be superior to that of standard autografts in that hypertrophy at graft interstices is minimized. In very large burns this procedure may be life-saving. Long-term results have been good so far, but careful follow-up is needed to evaluate function and appearance.

Airway Problems

More and more small prematures are being maintained on ventilatory support and are graduating from the neonatal nursery. In the early 1960's there was an epidemic of tracheal injury from long-standing endotracheal tubes with subsequent tracheal stenosis becoming a major medical problem. There have been rapid advances in the care of endotracheal tubes and fewer children are now developing airway injury and tracheal scarring. However,

* From the Children's Hospital, MUSC (Dr. Othersen), and the Departments of Pediatrics (Doctors Smith, Laver and Morgan, and Mr. Abboud); and the Department of Pathology and Laboratory Medicine (Dr. Garvin), Medical University of South Carolina, 171 Ashley Avenue, Charleston, S. C. 29425. Address correspondence to Dr. Othersen.

there remain the anatomic differences between the airways of children and that of adults. In adults, the narrowest point of the airway is at the glottis and any tube which fits through the vocal cords will pass easily through the remainder of the trachea. However, in children, the narrowest point is at the cricoid cartilage and a tube inserted through the cords, and which fits at that location, may be too tight at the cricoid (Figure 1). The physician may be unaware of the injury until stenosis develops.

There are now multiple procedures which can be utilized for tracheal stenosis in children. Occasionally an end-to-end anastomosis is possible but usually in well-established cicatricial stenosis an open tracheoplasty with insertion of a portion of costal cartilage must be performed. In more distal stenosis, pericardium or cartilage may be used as inserts to increase the tracheal diameter. Endoscopic balloon dilation has been successful in early granuloma and stenosis, but the best treatment continues to be prevention of injury by the use of the proper-sized endotracheal tube and by a tracheostomy when indicated (Figure 2).

Gastroesophageal Reflux

For many years children with gastroesophageal (G-E) reflux were primarily those with severe mental retardation who required a feeding gastrostomy, and fundoplication was often necessary to prevent reflux when gastric feedings were begun. The patients with reflux but without brain damage could often be maintained on thickened feedings and reflux precautions until the gastric cardia became competent. However, the strictures in some pa-

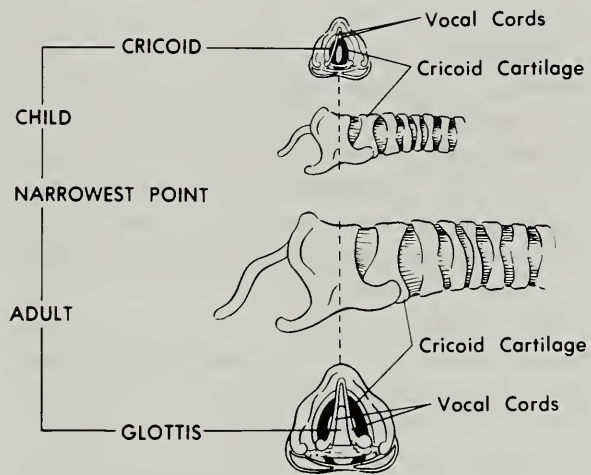


Figure 1

tients with post-anastomotic esophageal stenosis and also in some children with tracheal stenosis continued to worsen in spite of dilation. It has become evident that many of these patients have G-E reflux which produces a chronic inflammation of the strictures and prevents their resolution. These children, as well as those with distal esophageal strictures caused by reflux and esophagitis, must have the gastric acid reflux eliminated by fundoplication.

The introduction of 24-hour pH monitoring by our pediatric gastroenterologists has allowed the detection of chronic reflux and thus established the indications for fundoplication. Often, an upper GI series will be normal but a 24-hour study reveals prolonged and frequent episodes of acid reflux showing that fundoplication is necessary.

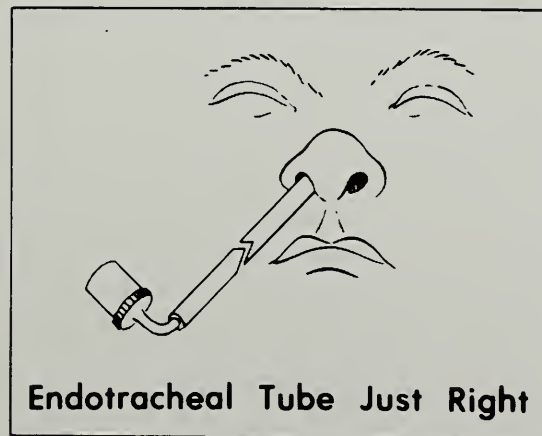
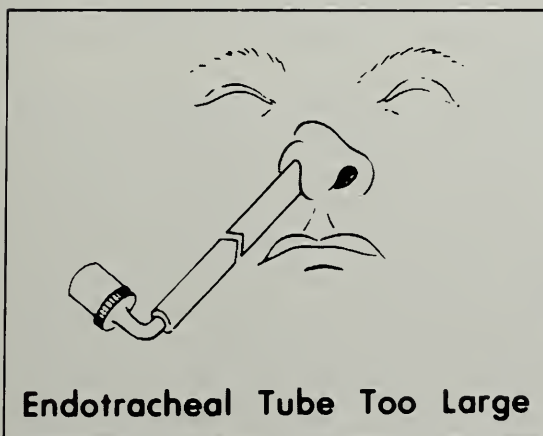


Figure 2

Trauma

Accidental injuries continue to be the leading cause of death in children with motor vehicle-related accidents leading the list. Children can be injured both as occupants and as pedestrians. Proper restraint in automobiles continues to be the best means of prevention and the use of helmets when riding bicycles reduces the severity of head injury.

As a means of gathering statistics and perhaps preventing more injuries, MUSC Children's Hospital contributes data, along with a number of other children's medical centers, to a centralized Pediatric Trauma Registry in Boston, Massachusetts. Thus, a large collection of data can be analyzed.

NEONATAL PROBLEMS*Biliary Atresia*

Untreated "uncorrectable" biliary atresia has been uniformly fatal at an early age in the past. Since 1979, when technical modifications of Kasai's original portoenterostomy were introduced at the Medical University, a number of these patients have been salvaged. Some now have good liver function and are leading normal lives. Others, who have had evidence of on-going liver injury with resulting portal hypertension, have been maintained with aggressive medical and nutritional support coupled with control of esophageal varices by outpatient endoscopic sclerotherapy. When liver function deteriorates, referral for liver transplantation now offers hope for long-term survival.

Imperforate Anus

A major advance in operations for imperforate anus, the "posterior sagittal anorectoplasty," was reported in 1980 by Pena and deVries. In this procedure, division and subsequent reconstruction of all the levator and anorectal sphincter muscles is carried out with optimal exposure through a posterior midline incision. All muscles are identified visually and by electrical stimulation. More complex deformities involving abnormalities of the vagina and urethra can be repaired through this same approach thus eliminating the need for a much less satisfactory staged series of procedures.

Posterior sagittal anorectoplasty has been the standard procedure for management of high imperforate anus, cloacal deformities, and failed pull-through operations since 1983 at MUSC.

Pyloric Stenosis

Management of the less dramatic but more common pyloric stenosis has been streamlined in recent years. In patients in whom the typical pyloric "olive" tumor in the epigastrium cannot be palpated, the diagnosis can be established non-invasively with ultrasound. More rapid preoperative resuscitation and postoperative feeding advancement has allowed reduction of hospital stay to a period of 24 to 48 hours in most patients regardless of the degree of dehydration on presentation.

PEDIATRIC ONCOLOGY

Over the past two decades a major improvement in the survival of children with cancer has been achieved primarily due to the development of new chemotherapeutic protocols and teamwork of oncologists, radiotherapists and surgeons.

As an indication of the rapid advances which have been made in the treatment of children with cancer, Wilms' tumor survival rates have improved so that a child with stage I Wilms' tumor has a 95 percent chance of cure from combined treatment with surgery, adjuvant chemotherapy, and radiation therapy. Greater than 50 percent of the children with metastatic disease or bilateral tumors survive with this combined approach. This improvement in therapy has resulted from the cooperative efforts of nationwide pediatric study groups. MUSC is an active member of one of these large groups, the Pediatric Oncology Group (POG).

These large cooperative groups have also provided the impetus and material for research into these relatively rare childhood tumors. At the Medical University, research in pediatric solid tumors has been conducted by Dr. A. Julian Garvin and his collaborators in the Department of Pathology and Laboratory Medicine. This group of investigators has successfully grown Wilms' tumors in tissue culture as well as in a colony of immunosuppressed mice. These techniques will make it possible to ex-

plore the efficacy of new approaches to therapy as well as the basic mechanism of tumor growth. For example, these investigators have recently shown that manipulation of growth factor stimulation can inhibit the growth of these tumors in tissue culture as well as in mice, and they are currently involved in the production of monoclonal antibodies to a specific tumor component. Thus, basic research into pediatric cancers at MUSC as well as other nationwide laboratories may provide new therapeutic modalities for these patients.

Other tumors such as rhabdomyosarcoma, osteogenic sarcoma and Ewing's sarcoma are also being treated successfully at MUSC. Aggressive therapies are currently designed for pediatric tumors in which the cure rate has not been as high as with other malignancies—i.e. neuroblastomas and tumors of the central nervous system. These treatments result in severe myelotoxicity and may require an autologous marrow transplantation. In this procedure a patient's bone marrow is harvested and stored (with or without purging, depending on whether the marrow is involved). Following chemo/radiotherapy the marrow is thawed and reinfused into the patient. Hematological and immunological recovery occurs usually within a few weeks.

As active members of POG, we utilize group protocols designed to treat leukemia and other hematological malignancies. This participation enables us to provide state of the art chemo/radiotherapy even when the drugs are controlled by the National Cancer Institute.

Once a patient with leukemia relapses his/her chances to be cured with conventional chemotherapy are relatively small. A curative approach for these patients is allogeneic bone marrow transplantation (BMT) which requires a compatible donor. Similarly to what has been described above, patients receive a myeloablative dose of chemo/radiotherapy followed by the infusion of donor marrow. For a few weeks the patients need reverse isolation for infection control as well as aggressive support with blood products and antibiotics. In case a donor is not available, for certain leukemias an autologous transplant can be attempted. The success rate with BMT in children is currently about 60 percent and continues to improve yearly. Having a bone marrow transplantation facility at MUSC enables us to treat not only newly diagnosed patients but also children who failed up-front therapy and to offer them a curative approach.

SUMMARY

Two hundred years ago, the first pediatric textbook was pessimistic about treatment of diseases in children. Even 25 years ago the outlook for children with cancer was dismal. Now as we approach the year 2000, we look forward to more major advances in medical therapy which will improve the outlook for our children. □

ACKNOWLEDGEMENT

Figures 1 and 2 reprinted with permission from *Annals of Surgery* 189(5):601-606, 1979.



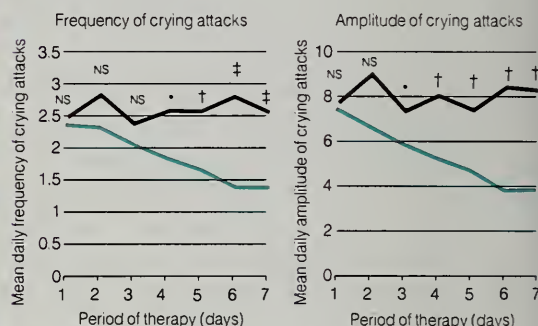
Family therapy for colic.

The excessive crying of colic puts a strain on the most loving family—and often on their physician as well. And whatever the cause of colic, one fact is clear:

Gas is often part of the colic problem.

New Phazyme Drops contains simethicone, which can safely break up gas and bring baby relief. That's why it can help whenever colic is a problem.

Significantly reduces crying of colicky infants.¹



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 Helps you through the colic phase.

1. Kanwaljit SS, Jasbir KS. Simethicone in the management of infant colic. *Practitioner*. 1988;232:508.

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SCMA

NEWSLETTER

MAY 1990

142ND ANNUAL MEETING, CHARLESTON, SC, APRIL 25-29, 1990

Elections

Following are results of elections which took place during the Thursday and Sunday House of Delegates' sessions:

President-elect:	J. Chris Hawk, III, MD, Charleston
Secretary:	Bartolo M. Barone, MD, Charleston
Treasurer:	S. Nelson Weston, MD, Columbia
Trustee, First District:	Richard E. Ulmer, MD, Charleston
Trustee, Second District:	Edward W. Catalano, MD, Columbia
Trustee, Second District:	Bryan L. Walker, MD, W. Columbia
Trustee, Fourth District:	James B. Page, MD, Greenville
Trustee, Fourth District:	Jerry R. Powell, MD, Anderson
Trustee, Sixth District:	James M. Lindsey, Jr., MD, Conway
Trustee, Sixth District:	Stephen A. Imbeau, MD, Florence
Trustee, Eighth District:	Dallas Lovelace, III, MD, Orangeburg
AMA Delegates:	Randolph D. Smoak, Jr., MD, Orangeburg Walter J. Roberts, Jr., MD, Columbia
AMA Alternate Delegates:	Charles R. Duncan, Jr., MD, Greenville Daniel W. Brake, MD, Charleston
Speaker of the House:	O. Marion Burton, MD, Anderson
Vice Speaker of the House:	Benjamin E. Nicholson, MD, Edgefield

At the reorganizational meeting of the board of trustees immediately following adjournment of the House of Delegates, Edward W. Catalano, MD, was elected chairman of the board and James B. Page, MD, was elected vice chairman. Carol S. Nichols, MD, will serve on the executive committee as trustee member-at-large.

Significant Actions of the House of Delegates

The House amended and adopted Resolution Number C-10, submitted by the Primary Care, Medicaid and Indigent Care Committee. This resolution calls for the SCMA to write all SC physicians to request that they provide medical care for their "fair share" of

Medicaid patients, recommending that each physician carry a caseload of 25 or accept two Medicaid patients per month. It also called for the SCMA to request each county medical society implement a local system, such as an equitable rotation plan, which would assist Medicaid patients in obtaining medical care.

Resolution Number C-11, submitted by the Charleston County Medical Society, calls for the SCMA to consider establishing a statewide emergency response capability. This resolution was referred to the board of trustees for further study and documentation of the problems and inadequacies of the response to Hurricane Hugo.

Each of the nine recommendations of the HEALTH CARE 2000 COMMITTEE was considered individually and the following actions taken:

Recommendation 1, which calls for a means test for Medicare, with mandatory assignment for those with an income less than 150% of poverty and abolishment of the Medicare Maximum Allowable Charge, was adopted.

Recommendation 2, that the age for Medicare eligibility be raised from age 65 to age 68, was also adopted.

Recommendation 3 was adopted, and calls for the enactment of a state law to require any attorney assisting in the creation of a Last Will and Testament be required to advise the client of the Living Will provisions of state law.

Recommendation 4 was referred to the board of trustees and SCMA Ethics Committee. This recommendation asks that a state law be enacted to provide immunity from liability for any physician who issues a no code order or does not order or discontinues artificial life support for any patient who in the opinion of the attending physician and at least one other physician and/or an immediate family member has no potential for recovery.

Recommendation 5, that a basic benefit plan be defined that would constitute adequate health care and that this minimum benefit plan be made available to everyone in the state, was adopted.

Recommendation 6, that every person in the state be provided the Basic Benefit Plan at a uniform cost under private and public programs, was referred to the board of trustees.

Recommendation 7 was amended and adopted. It calls for an appropriate tax on tobacco products and alcohol to fund the treatment of diseases and injuries resulting from the voluntary use of these products. The SCMA has drafted legislation to this effect.

Recommendation 8, that a statewide utilization review system be created, was also adopted.

Recommendation 9 was adopted, calling for development of incentives to assure placement of patients in the appropriate level of care.

Resolution Number F-9, submitted by the Georgetown County Medical Society, was amended and adopted, and resolved that the SCMA urge HCFA and the federal government to accept a physician acknowledgment statement to be valid indefinitely as long as a physician maintains an active medical license and medical staff privileges, rather than having the physician acknowledgment statement completed annually.

Awards

The A. H. Robins Physician's Award for Community Service was presented to Lewis N. Terry, MD, Greenville. Other nominees were Samuel C. Durso, MD, Columbia; Donald A. Crippen, MD, Seneca; Charles F. Crews, MD, Columbia; Brian Adler, MD, Surfside Beach; and T. Fleetwood Hassell, MD, Charleston.

Anderson County Medical Society received the first County Society Award for Community Service for its "Walk With the Docs" campaign to support the Anderson Free Medical Clinic. Accepting the award on behalf of the society was James R. Buehler, MD, president. Congratulations go also to the other nominees, Bamberg, Charleston, Georgetown, Lexington and Sumter-Clarendon-Lee Medical Societies for their worthwhile projects.

The President's Award was presented to John C. Hawk, Jr., MD, by Daniel W. Brake, MD.

Receiving the Thomas A. and Shirley W. Roe Award for the best article published in The Journal by an institution-based physician was James A. Majeski, MD for his article entitled "Venous Thromboembolism."

The 1990 Journalism Award, Television Category, was presented to Sharon Spears, medical reporter with WRDW-TV in North Augusta, SC. Spears' winning entry was on Camp Rainbow, a summer day camp in Leesville, SC for children afflicted with cancer. Winner in the Print Category was Debra-Lynn Hook, staff writer with The State in Columbia, for her entry on aging and health care problems associated with the elderly population. Dan Robinson, news director at WSPA Radio in Spartanburg, received the award in the Radio Category. He was recognized for his entry on infant mortality in SC which he produced while employed as news director at WCOS in Columbia.

Hurricane Hugo Relief Funds Presented

The SCMA presented almost \$40,000 during the Annual Meeting to area organizations rendering Hurricane Hugo relief services. Checks in the amount of \$10,000 each were presented to Sea Island Habitat for Humanity, East Cooper Habitat for Humanity and Sumter Habitat for Humanity. The Charleston Interfaith Crisis Ministry Clinic received \$3,000 and the St. Andrews Episcopal Church Clinic of Mt. Pleasant received \$1,000. The SCMA Auxiliary donated \$3,310 in cash and non-perishable foods to the Lowcountry Food Bank and a contribution of \$2,000 has been made to the MUSC Psychiatry Department for posttraumatic stress counseling.

HIGHLIGHTS OF APRIL 25 BOARD OF TRUSTEES MEETING

The board reviewed the draft recommendations of the DHEC Family Practice, Pediatrics and OB Task Forces. Comments of board members regarding these recommendations will be mailed to Mike Jarrett, DHEC commissioner.

Concern was expressed by board members regarding the involvement of Medical Review of NC in a pilot project which will conduct PRO review in physicians' offices in North Carolina.

The board agreed to seek legislation to establish a tobacco indemnification fund. This law would be financed through a tax on cigarettes of 50 cents per package. At the end of the year, purchasers of group health insurance plans would submit the total amount paid for tobacco-related illnesses and would receive a refund from the state tobacco indemnity fund.

The board provided the SCMA's Sports Medicine Committee with funds to print, disseminate and collate an injury information form which will be used to collect data on any injuries incurred by high school athletes.

SUBSIDIARY ORGANIZATIONS

Alexander Donald, MD, and John Metcalf, MD, have been elected to the board of directors of the SC Institute for Medical Education and Research (SCIMER). Eloise Bradham, MD, was elected the institute's president at a meeting held during the SCMA Annual Meeting.

New members of the SOCPAC board of directors are Ed Catalano, MD, Roger Gaddy, MD, William Meehan, MD, and Jim Page, MD.

MEDICARE UPDATE

H.R. 4475: Physician Regulatory Relief

In early April, an AMA bill designed to provide substantial

reforms for physicians in the Medicare program was introduced. H.R. 4475 contains five major reforms:

1. BILLING FOR COVERING PHYSICIANS: would mandate that HCFA allow "attending" physicians to continue to bill Medicare for services provided to a patient by a professional colleague who is simply "covering" for a temporarily absent "attending" physician;
2. PROHIBIT CARRIER CHARGES FOR NECESSARY DATA: Medicare carriers would be prohibited from charging physicians for information or documents that are needed to comply with Medicare statutory and regulatory requirements;
3. MANDATORY RELEASE OF CARRIER SCREENS: Medicare carriers would be required to provide physicians the actual criteria (numerical screens) utilized by the carriers in making "medical necessity" claims denials;
4. ALLOW MEDICAL SOCIETIES TO REPRESENT PHYSICIANS IN APPEALS OF INAPPROPRIATE DENIALS: State, county and specialty medical societies could represent physicians as a class and appeal inappropriate denials by carriers; and
5. ESTABLISH HCFA PHYSICIAN ADVISORY GROUP TO REVIEW MEDICARE REGULATIONS PRIOR TO IMPLEMENTATION: HCFA would be required to seek the advice of a formal advisory committee composed of practicing physicians (participating and nonparticipating) representing a cross section of specialties and practice locales.

H.R. 4475 was introduced by Georgia Rep. J. Roy Rowland, Jr., MD, who was the featured speaker at the SOCPAC luncheon during the Annual Meeting. The bill has 17 original cosponsors, including SC Representatives Butler Derrick and Elizabeth Patterson. The SCMA has asked other SC representatives to consider cosponsorship. You are encouraged to write your congressmen and stress the importance of this legislation.

Questions regarding Medicare should be directed to Barbara Whittaker at SCMA Headquarters.

AIDS UPDATE

Retrovir Program

The Bureau of Preventive Health Services of DHEC has advised that effective immediately the Retrovir Program will be unable to approve any new applicants for acceptance. South Carolina's funding was extremely limited since federal funds were allocated based on the incidence of AIDS among the states. With the funds available, however, approximately 115 people will be served through the Retrovir Program. To receive applications and/or

place new names on the waiting list in the event significant changes should occur in the funding level or program utilizations, contact G. Larry Sandifer, DHEC Bureau of Preventive Health Services, 2600 Bull Street, Columbia 29201, 737-4040.

AIDS User Guide

The National AIDS Information Clearing House (NAIC) has updated its "User Guide." The guide highlights the clearinghouse's services and resources and contains sections on NAIC databases, reference and referral services, outreach services, distribution and its newly opened Resource Center.

Of particular interest to physicians is the NAIC AIDS Clinical Trials Information Service -- a free service designed to give health professionals and patients the latest information about AIDS and HIV clinical trials. To contact the service, call 1-800-TRIALS-A. To request a copy of the "User Guide" call 1-800-458-5231.

UPDATE: SOUTH CAROLINA'S UTILIZATION REVIEW LAW

The law regulating utilization review firms requires that by May 1 such companies pay an \$800 fee and register appropriate information with the South Carolina Department of Insurance (737-6160 in Columbia).

Because this is a new law, some companies have been slow in applying and it is expected to take until July 1 to process these applications. SCMA members are encouraged to:

1. Request the "certificate number" of all utilization review companies which request medical information from your office; and
2. Continue to provide such information, even in the absence of the certificate number.

Effective July 1, a utilization review company should be able to provide its "certificate number" to your office. You should report UR companies which are unable to provide a certificate number to Tim Baker, SC Department of Insurance, 1612 Marion Street, Columbia 29201.

Please note that insurance companies which are licensed in South Carolina are otherwise regulated by the Department of Insurance and hence will not have a special UR certification number. Two lists will be provided to physicians later this year: one which includes all the licensed insurance companies and one which includes the certification numbers of the UR companies which are in compliance with SC law.

NEW EMERGENCY DEPARTMENT PATIENT TRANSFER REQUIREMENTS

The Omnibus Budget Reconciliation Act of 1989 expanded the requirements for emergency department patient transfers for those hospitals participating in Medicare. The new requirements become effective July 1, 1990. They are "self-implementing," that is, Congress stipulated that they go into effect even if implementing regulations have not been issued by that date. For a copy of the AHA Advisory describing the new requirements, contact Kim Fox or Joy Drennen at SCMA Headquarters in Columbia.

REREGISTRATION WITH STATE BOARD OF MEDICAL EXAMINERS

Physicians are reminded that July 1 is the deadline for applying to the State Board of Medical Examiners for your reregistration certificate. You should have received an application for reregistration from the board within the past few days. If you do not receive this application or if you have questions, you may call the State Board of Medical Examiners at 734-8901 in Columbia.

ANNUAL QUALIFICATION STATEMENT REQUIRED BY PA'S

According to state law, all professional corporations in South Carolina must file a qualification statement with the appropriate licensing authority by April 1 of each year.

Physician corporations must file such a statement with the State Board of Medical Examiners and provide the names and usual business addresses of their directors and officers.

If this law applies to you and you have not filed your qualification statement, please contact your attorney or the State Board of Medical Examiners for the necessary forms to be filed in order for you to be in compliance with the law.

UPCOMING CONFERENCES

The AMA Division of Practice Management will be conducting workshops in the next few months on gearing up for retirement, insurance processing, starting your practice and joining a partnership or group practice. For details, call 1-312-645-4958.

The second annual AMA HIV Conference, "Counseling, Testing and Early Care," will be held June 18-19, 1990 in San Francisco, CA. The registration fee is \$200.00 payable by check to the AMA, or you may use your MasterCard or VISA. To register or for additional information, call the toll-free hotline, 1-800-621-8335.

AID UPSTATE has scheduled its third annual AIDS Medical & Counseling Seminar for Wednesday, August 1, 1990, 9:00 a.m. to

4:30 p.m. at the Hilton Hotel, Haywood Road and W. Orchard Park Drive (Exit 39, I-385), Greenville, SC. The seminar theme is "Beyond AIDS 101." For information contact Al A. Hafer, EdD, NCC, LPC, 150 Executive Center Drive, B-167, Greenville 29615 (297-5030 in Greenville).

The South Carolina Medical Record Association will hold its 37th annual meeting July 18-20, 1990 at the Hyatt Regency at Palmetto Dunes Resort, Hilton Head, South Carolina. Topics scheduled include sessions on PRO Review in Physicians' Offices and RBRVS. Keynote speaker for the meeting is F. Lee Bailey, whose topic will be "Legal Issues in Healthcare Today." For more details and registration information, contact Carol Murphy, RRA, Program Chairperson, at 255-1373 in Greenville.

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Contributions welcomed.
Melanie Kohn, Editor
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798-6207, in Columbia
1-800-327-1021, outside Columbia

THE ROLE OF IMAGERY IN THE HYPNOTIC TREATMENT OF ADVERSE REACTIONS TO CANCER THERAPY

CARYN S. FELDMAN, PH.D.*
HERMAN C. SALZBERG, PH.D.**

There is a substantial and rapidly growing body of literature on the psychosocial aspects of cancer and its treatment.^{1, 2} Indeed, the field of psychosocial oncology is expanding as more clinicians recognize the need for interventions which conceptualize patients as part of a biopsychosocial system. The purpose of the present study is to assist in the discovery of ways to use the methodology of psychology to reduce the adversiveness of chemotherapy, one of the most widely accepted forms of medical treatment.

The research examining adverse reactions to chemotherapy may be divided into two categories: those focusing on pharmacological (post-treatment) reactions and those examining psychologically conditioned (pre-treatment) reactions. Pharmacological side effects are conceptualized as being caused directly by the pharmacological properties of the anticancer drugs. Conditioned reactions are conceptualized as psychological, rather than pharmacological in nature. This distinction arises from the clinical observation that many patients display nausea and emesis and express feelings of anxiety not only after receiving treatment, but before receiving it as well. Among the most frequent and distressing side effects are nausea and emesis.³

Estimates of the prevalence of conditioned side effects range from 18 percent⁴ to 65 percent⁵ and are widely acknowledged. However, it has only recently been the subject of systematic empirical observation. The etiology of nonpharmacological side effects remains controversial. Although a number of hypotheses

have been put forth, the one which has garnered the most empirical support conceptualizes these side effects as classically conditioned responses.⁶ After several courses of chemotherapy, previously neutral stimuli in the chemotherapy context become associated with the nausea, vomiting and negative effect produced by the chemotherapy drugs. After repeated pairings, the sights, sounds and smells of previously neutral stimuli elicit the side effects.

INTERVENTIONS

Although the physician has a wide array of antiemetic agents to choose from, at present no regimen is completely effective. Behavioral interventions are free of side effects, relatively easy to learn, may be used in other stressful situations and may increase a patient's sense of self-control. A number of researchers have examined the utility of these psychologically based methods of reducing adverse reactions to chemotherapy.⁶

The literature on hypnosis provides a number of accounts of its utility in reducing the distress of cancer patients. Claims have been made that it may reduce anxiety, pain and insomnia, alter moods, produce local anesthesia for venipuncture, spinal taps, bone marrow aspirations, biopsies and injections, and develop rigidity or flaccidity of the body to allow for care of wounds during radiology.⁷ Many of these reports are anecdotal and while encouraging and heuristically valuable, the scientific application of hypnosis to cancer patients has just begun.

To date, six case studies and four controlled studies using hypnosis with cancer chemotherapy patients have been reported. These studies were uniformly positive in suggesting that hypnosis could reduce chemotherapy nausea, pain, vomiting and anxiety.

* The Pain Evaluation & Treatment Institute, Baum Blvd. & Craig St., Room 1718, Pittsburgh, PA 15213. Address correspondence to Dr. Feldman.

** Department of Psychology, University of South Carolina, Columbia, S. C. 29208.

PRESENT STUDY

Previous research suggests that patients receiving behavioral interventions display greater reductions in adverse side effects than patients receiving traditional treatment (i.e., chemotherapy without a behavioral intervention). The present study attempted to replicate this finding within the context of a more rigorous methodology. A further purpose was to seek additional support for the finding that hypnosis is an effective treatment for certain chemotherapy side effects.

Although guided imagery has been incorporated into almost every behavioral intervention study published to date, its role in the success of these treatments has yet to be delineated. Previous research suggests that patients receiving combined hypnosis and imagery training demonstrate fewer adverse reactions than patients receiving either guided imagery or hypnosis alone. This study attempted to explore the role guided imagery plays in the reduction of chemotherapy side effects.

METHOD

Sixty male and female adult cancer outpatients receiving chemotherapy as their only current treatment at a local oncology clinic served as subjects. Prospective subjects were invited to participate in the study while awaiting chemotherapy during a routine appointment. They had previously received at least one treatment cycle to allow for the establishment of baseline responses and for medical personnel to have established dose and type of antiemetic medication. Subjects' responses were monitored during three sessions: baseline, and training sessions one and two.

Multiple measures were used to assess anxiety, nausea and emesis, the side effects of interest. These measures were the State-Trait Anxiety Inventory (STAI-Form Y-1) developed by Spielberger,⁸ heart rate, and self-report scales assessing severity of anxiety, nausea and emesis. Physiological and self-report measures were administered before, after, and 24 hours following each administration of chemotherapy.

Prospective subjects were randomly assigned to one of four groups (Hypnosis-Imagery; Hypnosis; Imagery; Traditional Treatment). Patients were given a description of the

study and specific information appropriate to the experimental condition to which they were assigned.

Subjects in the Hypnosis-Imagery group were given a brief introduction to hypnosis and imagery. Experimenters attempted to induce a trance and followed this procedure with descriptions of structured images,⁹ which were followed by chemotherapy administration. Once chemotherapy terminated, subjects were aroused from trance and completed the outcome measures. Hypnosis and Imagery conditions followed similar procedures. Subjects in the Traditional Treatment condition received their treatment in a routine manner.

Several factors inherent in the disease process of cancer, its treatment regimen and organizational/logistic variables complicate research in the area of psychosocial oncology. Given the vast array of potential sources of error variance, practical limitations prevented the possibility of controlling for all these variables. Because the health and medical treatment of patients were given priority, design considerations were secondary.

All subjects received antiemetic medications which were held constant throughout the study. To control for type of cancer, drug protocol and emetic potential of the protocol, subjects were randomly assigned to groups while attempting to equate conditions on these variables. The regimens were standard protocols for each diagnostic category represented. Each protocol was rated by the oncologists for the purpose of measuring emetic potential. Means and standard deviations for the emetic potential by group were calculated, and it was determined that this variable was balanced and was not likely to be a significant source of error variance. Because specific drugs received for any chemotherapy protocol may vary over successive treatments within a treatment cycle, all subjects began training on the first day of a treatment cycle. In the event that patient health changes necessitated reductions in the dose of medications received, the subject was terminated from the study.

RESULTS

A 4 (Hypnosis, Imagery, Hypnosis-Imagery and Traditional Treatment) X 3 (Baseline, Session one, Session two) repeated measures anal-

ysis of variance was performed on each of the measures. It was hypothesized that there would be a significant difference between groups over time on each measure. However, with respect to pre-chemotherapy self-reported nausea and emesis, low prevalence rates were responsible for no differences being found between groups over time. With respect to anxiety prior to and 24 hours following chemotherapy, low prevalence rates again contributed to no difference being found between groups over time. A 4 X 3 repeated measures analysis of variance with post-chemotherapy state anxiety as the dependent measure was conducted to test the hypothesis that post-chemotherapy anxiety was affected by the behavioral interventions. Results indicated a significant group by time interaction $F(6, 112) = 2.40, p = .03$. A planned comparison F-test was conducted collapsing across treatment groups comparing these to Traditional Treatment, with post-chemotherapy anxiety measures compared at sessions one and three. Results suggested significant differences between the behavioral treatments and Traditional Treatment, $F(1, 178) = 7.14, p = .008$. A subsequent planned comparison looked at the difference between the treatment conditions hypothesizing that the Hypnosis-Imagery group would show significant differences from the Imagery and Hypnosis groups. Using post-chemotherapy anxiety compared at times 1 and 3, the results suggested no significant differences between these groups.

DISCUSSION

The ability to detect differences between traditional and treatment conditions with respect to nausea and emesis was severely limited by the lack of subjects experiencing these symptoms throughout the course of the study. Subjects' ratings of nausea and emesis showed that only 15 percent of patients experienced nausea and only 1.7 percent experienced emesis prior to chemotherapy at baseline. Although the literature predicted anticipatory nausea prevalence rates of 21 percent¹⁰ to 44 percent,¹¹ and anticipatory emesis rates of nine percent to 33 percent,¹⁰ the present study reveals rates which are much lower in comparison. It is possible that certain environmental variables specific to the oncology clinic in this study combined to

produce low prevalence rates (e.g., waiting room atmosphere, size of facility). Low prevalence rates may also be due to this study's operational definitions of the phenomena. Patients were evaluated at baseline for symptoms prior to a chemotherapy treatment on Day One of a cycle. This decreases the probability that a patient would display symptoms from emetogenic agents and increase the probability of symptoms being displayed solely from psychological factors. Andrykowski¹² argues that pharmacological confounds must be excluded from the study of conditioned nausea and emesis, and that once this occurs, prevalence rates will decrease. The present study supports Andrykowski's findings and advocacy for more rigid and narrow operational definitions.

The findings regarding anxiety as an adverse side effect were mixed. Prevalence rates of pre-chemotherapy anxiety as measured by heart rate, the STAI and self-report scales were low. However, a significant group by time interaction, with post-chemotherapy state anxiety as a dependent measure was found. Results suggested a significant difference between behavioral treatment groups compared to traditional treatment over time, from baseline to session 3. Although no evidence was found for the superiority of one form of behavioral intervention over another, these patients as a whole tended to fare better than those without a behavioral intervention. Indeed, patients in the Traditional Treatment group displayed a tendency towards increasing anxiety over time.

SUMMARY

Previous research suggested that behavioral interventions have been helpful in reducing patients' adverse reactions to cancer chemotherapy. The present study attempted to improve on past research by replicating this finding within the context of a more rigorous methodology. This study attempted to control for the wide range of nuisance variables inherent in research of this nature. It was expected that behavioral treatments would be superior to traditional treatment in reducing symptoms of nausea, emesis, and anxiety related to chemotherapy. The ability to detect differences between traditional and treatment groups with respect to nausea and emesis was limited due to low prevalence rates of these

symptoms. Prevalence rates of pre-chemotherapy anxiety were low, but behavioral treatment subjects reported less state anxiety following chemotherapy than traditional treatment subjects. Although no evidence was found for the superiority of one form of behavioral intervention over another, these patients tended to fare better than those without a behavioral intervention. □

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DOSE-INTENSE CHEMOTHERAPY IN CANCER MANAGEMENT

M. FRANCISCO GONZALEZ, M.D.*
DONNA S. CARR, PHARM.D.**

INTRODUCTION

One of the most important issues medical oncologists face today relates to the administration of the maximum permissible dose of an antineoplastic drug to each patient. Fundamental assumptions described 20 years ago led to the concept that more is better; i.e., greater efficacy will be produced by higher doses, subject to constraints of host tissue toxicity. Although this principle is firmly imbedded in both research protocols and accepted treatment practices, a special challenge is presented by the individual with impaired bone marrow reserve, or with hepatic and renal function abnormalities. The practical motivation for dosage adjustment is well understood by all; if the full dose is given to patients with impaired ability to eliminate the drug from the body, severe and unacceptable toxicity can be expected. Thus, essentially all treatment regimens provide dosage reductions based on age, previous therapy, liver and kidney function tests and ultimate effect on bone marrow reserve. Although these dosage reduction schemes are entrenched in everyday oncologic practice, systematic effort to describe their pharmacologic basis or to validate their usefulness has not been adequately substantiated to date.

In the absence of any other information, a typical empirical approach is to deliver the standard dose of drug or drugs to the patient and then adjust doses on the next cycle, based upon clinical observation of toxicity. This principle considered in the past the concept of dose-response in which a direct relationship between dose increment and therapeutic efficacy was demonstrated. Recent studies now

include the concept of dose-intensity response, where the time interval utilized in the delivery of the total cumulative dose is considered in the initial calculations.

THE EVOLUTION OF CHEMOTHERAPY

The Relationship Between Dose and Tumor Response

Dosing of chemotherapy has traditionally taken a different approach as compared to dosing of other pharmaceuticals. Most pharmaceuticals are administered either as a standard adult dose or a dose based on the patient's body weight; however, chemotherapy is dosed based on the patient's body surface area represented in square meters (m^2). This figure takes into account both the height and weight, and therefore may be a more accurate guideline for giving comparable doses of the drugs to a diverse body frame patient population. There are two methods of obtaining the proper body surface area for a patient. The first is with the use of a nomogram, and the second is through calculation with the body surface area equation, such as the one proposed by Haycock et al:¹ $\text{body surface area } (m^2) = \text{weight}^{.5378} \times \text{height}^{.3964} \times 0.0242$.

The importance of prescribing the appropriate dose of chemotherapy has been emphasized by Frei and Canellos.² If too large a dose is given, the toxicity may be intolerable for the patient. If too small a dose is given, inadequate tumor response may be seen and the disease will progress. In certain tumors, even a slight increase in dose has been shown to produce a significant increase in response. But how should this dose be given in relation to time? This question is now being investigated with the development of the dose intensity (DI) concept defined as the amount of drug delivered per unit of time.³

* Division of Hematology/Oncology, Department of Internal Medicine, USC School of Medicine, Columbia, S. C. 29208.

** Department of Pharmacy Practice, USC College of Pharmacy, Columbia, S. C. 29208.

Total Dose and its Relationship to Time

Dose intensity in cancer chemotherapy is expressed as $\text{mg}/\text{m}^2/\text{week}$.³ When a single agent is used, the DI is easily determined. For example, if 5-fluorouracil (5-FU) is given as a regimen A in a dose of $1000\text{mg}/\text{m}^2/\text{d}$ for four days in 21-day cycles, the DI is $1333\text{ mg}/\text{m}^2/\text{wk}$. In regimen B, if 5-FU is given as a one time dose of $1000\text{mg}/\text{m}^2$ every 21 days, the DI decreases to $333\text{mg}/\text{m}^2/\text{week}$.

In order to compare the DI of a single agent in a new regimen to that used in a standard protocol, the DI administered in the new regimen is divided by the DI used as standard and the results are expressed as a ratio. If the number is greater than 1.0, the new regimen is said to be more intense, and less intense when the ratio is below 1.0. This ratio defines the relative dose intensity (RDI) of the new regimen. Using the previous example with 5-FU, given that regimen A is the new and regimen B is the standard protocol, respectively, the DI in regimen A is divided by that used in regimen B ($1333/333 = 4$), resulting in the test protocol being four times more intense than the standard.

Many protocols for cancer therapy include the administration of more than one drug. In order to compare regimens incorporating several drugs, we must define the total average RDI of the protocol. First, the DI for each drug in the test regimen is calculated and divided by the corresponding DI of the same drug in the standard protocol. Then, the individual relative dose intensities are added and divided by the number of drugs used in the protocol. If a drug is missing from the test protocol, it will be assigned a relative DI of zero, but when the total relative DI is calculated, the denominator should include the number of drugs present in the standard regimen. If drugs vary between the protocols, equally effective doses of two different drugs in treating a particular cancer can still be compared measuring their relative contribution to complete and partial response, and overall survival.⁴

An important concept to emphasize when evaluating dose intensities of various protocols is to utilize the received DI rather than the projected DI to be administered according to protocol guidelines. Many patients require decreases in their chemotherapy dosing over a

period of time due to excessive toxicity. This may result in a reduction in efficacy, particularly when a tumor dose response association is known to exist.³

Assumptions

The relative DI calculated from several protocols has been obtained either following retrospective analysis of published data when available, or using an alternative approach for testing drug equivalence based on simple arithmetic operations. Ideally, the projected relative DI of current chemotherapy protocols against various diseases should be tested in a prospective, randomized manner in order to evaluate the relative contribution of individual agents in the tumor response.

The methodology observed in these calculations takes into consideration several assumptions posing some limitations in the overall concept of DI; that is, the time element over which the treatment is administered. First, it is necessary to assume that scheduling does not determine antitumor response directly but it affects tolerance and toxicity. A few exceptions should be made including the use of ara-C or hydroxyurea as an IV bolus or IV continuous infusion. The toxicity of an agent might be enhanced with IV bolus administration at three-week intervals in comparison to IV continuous infusion. If severe toxicity is observed, the received DI will be less, and the total cumulative dose will be probably suboptimal for tumor response. Therefore, scheduling may determine outcomes more by indirect effects than direct effects on the tumor. A second limitation is the assumption that in combination chemotherapy the individual drugs are equivalent in activity which implies a similar change in response for a given degree of change in DI. In a retrospective analysis for ovarian carcinoma, the published data allowed the calculation of tumor response within a narrow range of DI.⁵ Under these conditions, platinum was demonstrated to be the most active drug; but this information is not always reported in detail and for many protocols we have to use alternative approaches for testing drug equivalence.

Thirdly, the route of administration constitutes another potential limitation when only a proportion of the drug is absorbed from the

gastrointestinal tract. Erratic oral absorption occurs with 5-FU, VP-16 and melphalan. When there are pharmacologic reasons to anticipate different end results according to the route of administration, identical dose intensities of the drugs should be maintained in the various treatment arms. Finally, the potential effects of drug-drug interactions need to be considered as a determinant of drug availability in several protocols where biochemical modulations are well characterized and exploited in clinical trials utilizing agents such as 5-FU and hydroxyurea. Under these circumstances, correction factors should be employed for the calculation of DI to avoid unexpected shifts in the dose-response curve.

PRACTICAL APPLICATIONS

Hryniuk et al studied the dose intensities of three common chemotherapy protocols used in patients with metastatic breast cancer.⁶ They chose the cyclophosphamide, methotrexate, 5-FU, vincristine, and prednisone (CMFVP) combination as the standard. With this regimen an objective response rate of 88 percent has been reported. They compared the DI of protocols incorporating the above mentioned agents to the DI of the standard protocol. In their comparison, the average DI of the most recent studies was 10 to 15 percent lower, and this correlated directly with attenuated response rates.

Hryniuk extended his observations to other combinations utilized in breast carcinoma such as 5-FU, adriamycin and cyclophosphamide (FAC) and once again a relationship between DI increase and response rate was demonstrated. In all of these breast carcinoma trials it was noted that the median survival time (MST) was longer in the responders than that of nonresponders. When the remission rates against the MST of the entire group are analyzed, one finds that an increment of the remission rate from 20 to 80 percent is correlated with a MST prolongation from 10 to 20 months. Therefore DI may be a major determinant of both response and survival. This retrospective review emphasizes that further clinical trials should deliver active agents with the highest DI that can be tolerated taking into consideration the diverse toxicity posed by the

scheduling (continuous infusion vs bolus administration).

Another potential use of chemotherapy intense programs has been described in patients with untreated and previously treated advanced ovarian carcinoma. The standard regimen was described by Greco et al in 1981 involving a combination with cyclophosphamide, hexamethylmelamine, doxorubicin, and platinum (CHAP).⁷ Dose intensities were 175, 525, 10 and 15 mg/m²/wk, respectively, for each of the drugs in CHAP. The DI for each drug in the other regimens was converted to the common form of mg/m²/wk, and expressed as a decimal fraction of the DI of the same drug in the standard regimen.

Reports including the received DI and survival data for untreated patients were analyzed to identify the role of each of the agents within the CHAP program in the induction of complete or partial remissions and the effect on survival. Most of the studies demonstrated a disproportionate contribution of platinum to outcome over any other drug within a DI sub-range. There was no relationship between clinical response and relative DI for doxorubicin or cyclophosphamide. In previously treated patients with progressive disease where combination chemotherapy was administered again, platinum alone was the most effective salvage modality for individuals who failed chemotherapy without this drug. The addition of other drugs to platinum increased the DI, but not the clinical response; and second-line regimens not containing platinum showed a dose-response curve shifted down from the line corresponding to multiagent chemotherapy containing platinum. These observations suggest that platinum alone is the most effective salvage modality for patients with advanced ovarian cancer and that other commercially available agents are not likely to confer any real advantage and may detract from platinum related efficacy by introducing toxicity requiring dose reduction and treatment delays.

Preliminary observations in patients with locally advanced or metastatic head and neck carcinoma treated at our institution with platinum, ara-C, and hydroxyurea have indicated a potential relationship between DI of ara-C and response. A response rate of greater than 60 percent was obtained when the administered

ara-C DI exceeded 0.7, in contrast to 20 percent for less intensively treated patients. However, in order to preserve a therapeutically beneficial ara-C DI and at the same time minimize excessive myelosuppression, the total ara-C dose per cycle was split in two treatments without modifications in the other two agents.

CONCLUSION

Retrospective analyses have shown correlations between outcome and DI of chemotherapy for a variety of drugs against breast and ovarian carcinoma. These principles will probably have a role in our decisions for protocol design and implementation of new drugs for clinical use in prospective trials. As a result, these new concepts will be submitted to rigorous testing from which new decisions may emerge for improving cancer treatment. □

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METASTASES FROM SQUAMOUS CELL CARCINOMA OF THE SKIN*

STANLEY M. WILSON, M.D.

JAMES H. PHILLIPS, M.D.

J. CHRIS HAWK, III, M.D.

JOHN C. HAWK, JR., M.D.

INTRODUCTION

Non-melanoma skin cancer is found commonly in actinically damaged skin and can usually be managed with simple outpatient treatment. Squamous cell carcinomas account for about 20 percent of all cutaneous malignancies and generally are cured with adequate local measures, and metastasis to regional nodes has been found to occur in only one to two percent of patients.¹ Squamous cell carcinoma arising in areas with previous thermal burns, osteomyelitic sinuses, or radiation dermatitis are known to be far more likely to behave aggressively and result in metastatic disease.² However, it has been recognized that even without those antecedent conditions that deeply invasive extensive lesions are also occasionally a cause of significant morbidity and mortality. Recent experience with several patients reflects a need for careful long term follow-up in high risk patients with a consciousness of the risk of development of life-threatening metastatic disease.

CASE NO. 1

P. O. is a 71-year-old male seen and treated in January, 1989, by his dermatologist for a one cm. squamous cell carcinoma of the right cheek area. Less than four months later the patient noted a 3.5×3 cm. mass at the angle of the right mandible and a fine needle biopsy was consistent with metastatic squamous cell carcinoma. He is a non-smoker and no other primary site was found. A right radical neck dissection with superficial parotidectomy was done shortly thereafter and findings were of a large metastatic squamous cell carcinoma in-

volving only a single node with invasion directly into the sternomastoid muscle, adjacent soft tissue, and the parotid gland. The patient recovered uneventfully from operation and was advised to have postoperative irradiation which he declined to receive. Seven months following neck dissection he remains free of recurrence.

CASE NO. 2

D. H. is a 65-year-old female who was found in December, 1983, to have a very large ulcerated squamous cell carcinoma of the right hand extending from the thenar eminence across the metacarpal into the first web space. She had a moderately well-differentiated tumor with perineural and vascular invasion and involvement of the bone, and after a ray amputation was done initially, she had amputation of the right hand at the mid forearm level in January, 1984. She did well and was seen at regular intervals until January, 1988, and then failed to keep scheduled appointments.

She presented in April, 1989, with a 12×10 cm. draining right axillary mass, and biopsy through skin defect showed poorly differentiated squamous cell carcinoma. Staging was done and no visceral metastasis was found. Multidisciplinary consultation was completed and an aggressive program and neo-adjuvant chemotherapy was recommended in the hope of avoiding a forequarter amputation. She received two courses of infusion Platinol and other drugs including 5FU, calcium leucovorin, Velban, and Bleomycin. After the first round of chemotherapy she developed some mucositis and dehydration but had a dramatic response with shrinkage of the tumor after the second course to $3 \times 2 \times 4$ cm. She continued to have an open draining wound. A radical

* From the Departments of Surgery and Pathology, Roper Hospital, 316 Calhoun Street, Charleston, S. C. 29401. Address correspondence to Dr. Wilson at 30 Bee Street, Charleston, S. C. 29403.

axillary dissection including part of the axillary vein with suture repair was then completed successfully. All margins were free of neoplasm and she recovered uneventfully with normal use of her arm. In spite of previous hand amputation, she has good function with her arm. Subsequently, she received two more rounds of chemotherapy and then was referred for adjuvant radiation therapy which she completed without difficulty to a dose of 5,000 rads. She is currently free of disease.

CASE NO. 3

E. C. was an 81-year-old man seen in August, 1988, with a metastatic squamous cell carcinoma of the skin involving the left parotid area with a draining sinus. About 10 months prior to that he had a two cm. moderately differentiated squamous cell carcinoma of the left preauricular area removed with margins free of tumor. Six months later he returned with a two cm. mass at the angle of the jaw which grew rapidly and underwent spontaneous necrosis and drainage. Radiation therapy was begun. He had shrinkage of the main tumor mass but over the next six weeks developed multiple new nodules in the left upper neck and ultimately developed nodules in the right submandibular area. These were documented by biopsy to be metastatic squamous cell carcinoma also, and were felt to be in the lymphatics of the skin. The patient was not considered a surgical candidate in the view of the degree of involvement of the skin and fixation near the angle of the left mandible. He was referred for chemotherapy which he elected not to have and he expired of progressive metastatic disease in November of 1988.

CASE NO. 4

J. T. is a 77-year-old while male who was treated elsewhere for a large squamous cell carcinoma of the left index finger with excision and a skin graft in early 1988. He had a very aggressive lesion with ulceration and tumor extension into the deep dermis but clear margins were obtained. He presented in March, 1989, with a six cm. left axillary mass under the pectoralis major muscle thought initially to represent a sarcoma. A needle biopsy of the mass was consistent with metastatic squamous cell carcinoma. Physical exam and work-up

including a CT scan showed no other disease. A left axillary node dissection was performed, and the tumor was noted to be surrounding the brachial plexus and could not be removed with free margins. After discussion with the patient and the family, a left forequarter amputation was carried out one week later with all margins negative. He received postoperative radiation therapy without incident. Two months later chest x-ray showed a large left pleural effusion but cytology on pleural fluid on two occasions was negative for neoplasm. In November, 1989, a density was noted in the right lower lung field suspicious for metastatic disease. The left pleural effusion has not progressed, and he has shown no evidence of local recurrence on the chest wall. However, he has gotten progressively weaker and after discussion with the patient and his family, he has been referred to Hospice for supportive care.

CASE NO. 5

S. S. was a 61-year-old male from California with recurrent squamous cell carcinoma of the right epitrochlear area when seen for the first time in September, 1982. Since 1943 he had had multiple lesions of the right hand including both squamous cell and basal cell carcinomas, and in January, 1981, he was found to have a four cm. right epitrochlear mass. It was resected at that time with incomplete margins and was found to be a poorly differentiated squamous cell carcinoma with invasion into fibroadipose tissue. No additional treatment was given, and in December, 1981, he was found to have recurrence in the same area with a four cm. mass. Re-excision was attempted with findings of neural invasion, and the pathologic specimen was again found to have neoplasm in the margin.

Following this he was given 5,000 rads of external beam radiation therapy, but he developed a 1.5 cm. tumor nodule in the same area during his course of treatment. A third surgical procedure in the same area was then performed which included a wide excision and placement of a split-thickness skin graft. Three months later he moved to South Carolina and presented shortly after with an enlarging slightly cystic nodule measuring 1.5 cm. in the middle of the skin graft site. His exam was otherwise significant only for diffuse severe

actinic change of the face, arms, and neck. He had nothing to suggest other metastatic disease with a normal chest x-ray.

The possible necessity for a forequarter amputation was discussed, but the patient was understandably anxious to try more conservative measures first. Therefore, the recurrent epitrochlear tumor was resected with preservation of the ulnar nerve and placement of another skin graft. Axillary dissection had been considered but was deferred based on the normal clinical exam. The pathologic specimen showed a well-differentiated keratinizing squamous cell carcinoma with invasion into skeletal muscle but all resection margins free of tumor. There was no postoperative neurologic deficit, and after more than seven years of follow-up, he has had no evidence of further metastatic disease.

DISCUSSION

The incidence of metastatic disease from squamous cell carcinoma of the skin developing in the setting of actinic damage has been estimated to vary from .5 percent to 16 percent.³ The higher figures come from selected patient groups frequently already treated one or more times for local recurrence. A majority of the lesions causing metastatic disease are large, greater than two cm., and the depth of invasion, as with malignant melanoma, has been suggested as a primary determinant of metastatic potential.⁴ A recent study of patients referred for Mohs chemosurgery at Duke University documented 80 percent of recurrences of squamous cell carcinomas of the skin within the first year and virtually all within two years.⁴ A frequent associated finding was inability to control the primary tumor.

Perineural invasion is often seen with advanced lesions and has been associated with more aggressive tumor behavior and a much higher risk of regional disease and ultimate treatment failure.⁵ This is especially true of cancers of the skin of the face and neck and in that situation is associated with a grave prognosis, not uncommonly extending intracranially. Another significant risk factor for subsequent recurrence after nodal dissection is the finding of extension of neoplasm through the capsule of lymph nodes out into soft tissue. This would in general be considered an indica-

tion for adjuvant radiation therapy and a definite risk factor for ultimate treatment failure. It is of interest in the context of this patient group, however, that histologic review of all tumors in this series failed to show any striking or unusual features. Most of the patients had tumors which were moderately differentiated with typical squamous pearls. Deep invasion into adjacent tissues did seem to be a common denominator, however.

The experience described here would support long-term follow-up of high risk patients in the hope of identifying metastatic disease while still treatable for cure ideally without extremity amputation. Patient number 1 was found with metastatic disease which was still resectable although the tumor was already invading muscle and adjacent soft tissue. Patient number 2 had a disease-free interval of more than five years prior to presenting with a huge draining mass which was managed without amputation after significant reduction in size with chemotherapy. The ultimate role of chemotherapy in this patient in terms of possible cure cannot be determined because of the short follow-up period, but this case would certainly stimulate interest in further trial of chemotherapy in this disease.

Patient number 3 exemplifies the rare problem of very aggressive tumor behavior which may defy all efforts at local control. Patient number 4 who required forequarter amputation is alive with apparent recurrence of disease but has had some palliation of the pain caused by invasion of the brachial plexus. Unfortunately, treatment for such advanced disease is often fraught with recurrence, and in the future with such patients the use of chemotherapy may be considered. Patient number 5 is of interest in that he developed epitrochlear lymph node metastasis. He had three local recurrences following incomplete excision and radiation therapy, and in spite of this the patient appears to be cured following local re-excision after clear margins were finally obtained.

Optimal management following treatment of large or deeply invasive squamous cell carcinoma of the skin must then start with verification of clear surgical margins by the pathologist. Physical exam should then be performed regularly to assess the possibility of

local or regional recurrence, as well as to look for new primary cancers. If suspicious adenopathy develops, fine needle aspiration biopsy may be very useful, making preliminary incisional biopsy necessary only in the exceptional case.

Elective lymph node dissection has been suggested in patients with high risk primaries. This is a definite consideration in patients with carcinomas developing in areas of chronic ulceration or radiation or thermal injury, in whom the risk of metastatic disease may be 30 to 40 percent. However, in patients with lesions presenting on typically actinically damaged skin it would still seem to be more prudent to follow them clinically without dissection unless they develop disease. One of the significant problems with doing regional lymph node dissection without palpable disease is selecting the appropriate lymph node basin for operation. It has been recognized that skin cancers on the hand or arm may go to the epitrochlear lymph nodes as in patient number 5 before going to the axillary nodes, and the report from M.D. Anderson Hospital¹ described 26 of 86 patients with upper extremity tumors who had involvement of both epitrochlear and axillary nodes. In that setting forequarter amputation will usually ultimately be necessary.

In summary, large or deeply invasive squamous cell carcinomas of the skin should be thought of as having a significant potential for metastatic disease with morbidity and even death, and close follow-up examination should be carried out indefinitely. Public education should provide an awareness that skin cancer is not only an inconvenience or an aggravation but potentially a lethal disease. Increasingly the multidisciplinary approach to metastatic disease may be helpful. □

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OBSERVATIONS ON TUMOR SEEKING AGENTS FOR CANCER DIAGNOSIS AND THERAPY*

STEPHEN HOLT, M.B.
ROBERT E. POWERS, PH.D.

INTRODUCTION

The clinical application of selective localization of malignant disease by tumor seeking compounds remains an unfulfilled objective of the oncologist.^{1, 2} The development of monoclonal antibodies (MCA) that react with tumor-associated antigens has heralded a new era in attempts to target cancer tissue (Table 1). Although MCA have been introduced commercially for use in immunohistochemistry, cytological analysis of cell types or the monitoring of tumor status,³ widespread clinical application of these agents for in vivo diagnosis or treatment is still awaited. Extensive animal and clinical research utilizing MCA as radioimmunoimaging agents has been intensified by substantial public and private sector investment without the appearance of a commercially available product for in vivo use.^{1, 2}

MONOCLONAL ANTIBODIES

The repeated demonstrations that intravenously administered monoclonal antibodies will "home in" on selected antigenic targets has posed exciting prospects for the diagnosis and treatment of malignant disease (Table 1). When radiolabeled with a gamma emitting isotope, a monoclonal antibody can be traced by external scanning with a gamma camera (radioimmunoimaging), thereby permitting the early detection of tumors and metastatic disease.^{1, 2} The production of MCA that are directed against tumor-associated antigens can be used for radioimmunoimaging and immunotherapy with unlimited theoretical potential. If accurate staging of cancer is facilitated by such methodology then appropriate intervention could be planned for specific types of

TABLE 1
Uses for a Monoclonal Antibody
Against a "Tumor-Specific" Antigen

<i>In Vitro:</i>	<i>In Vivo:</i>
Immunohistochemistry	Radioimmunoimaging
Cytologic Analysis	Radioimmunotherapy
Serodiagnosis of Cancer	Photoimmunotherapy
	Chemoimmunotherapy

malignancy. A tumor seeking agent, such as a MCA, has the potential for being conjugated with a toxic agent such as a chemotherapeutic drug or a radionuclide that will deliver harmful radiation selectively to the tumor mass (radioimmunotherapy).³ This selective delivery of a therapeutic agent may avoid problems that are associated with "total body exposure" that occurs with conventional chemotherapy.

The key to the production of MCA for cancer diagnosis and treatment is the isolation and characterization of an antigen that is specific to a neoplasm. Most currently recognized tumor associated antigens are expressed in fetal tissue preferentially but many are relatively non-specific.³ Such tumor associated antigens are usually glycoproteins, glycolipids or glycosaminoglycans. Intensive studies have been performed using onco-fetal antigen systems which have a wide distribution among different tumor systems, including carcinoembryonic antigen and alpha fetoprotein.³ Pregnancy related antigens have been utilized in immunodetection of neoplasia, including human chorionic gonadotropin, pregnancy-specific glycoprotein and milk-fat globule antigens. Common to all of these antigen systems is a lack of specificity. Within an individual cancer, there may be a heterogeneous population of tumor cells with variation in antigenic expression, such that the candidate targeting agent may react with the primary neoplasm but

* From the Division of Digestive Diseases and Nutrition, University of South Carolina School of Medicine, Columbia, South Carolina. Address correspondence to Dr. Holt at Two Richland Medical Park, Suite 506, Columbia, S. C. 29203.

not the metastases.⁴ Several physiologic factors determine the access of a MCA or other tumor seeking agents to neoplasia. These factors include vascular supply of the neoplasm, blood flow and availability of interstitial fluid.⁴ Attempts to compensate for these problems by using more than one MCA in a "cocktail" have met with limited success. Access to the tumor by the MCA may be facilitated by the use of antibody fragments.⁴ The smaller molecule of the fragment of the MCA has more rapid blood clearance than the whole antibody, conferring the advantages of less of a foreign protein load to induce sensitization of the host to the injected protein and improvement in imaging by more rapid clearance of background radioactivity, thereby increasing the "signal to noise" ratio on a scintiscan.⁴ To facilitate the clearance of radiolabelled antibodies from the systemic circulation antibodies to the tumor seeking MCA have been used to "mop up" free circulating MCA. The prospect of making "tailor made" MCA to a neoplasm holds great promise. Such antibodies could be produced by removing cancer that tissue bear specific antigenic components and producing produce specific MCA of animal or human type against the neoplasm in question. The "tailor made" MCA can be used in subsequent diagnosis and therapy of the patient.

LECTINS

Although much effort has focused on antibodies for localization of malignant disease, other novel agents with tumor seeking properties have undergone extensive investigations in animals and man.^{2, 5} Lectins are ubiquitous sugar binding proteins or glycoproteins of non-immune origin which agglutinate cells and/or precipitate glycoconjugates.⁵ These compounds have been found in a wide range of organisms including plants, bacteria, molds, algae, fish, sponges, snakes, eels and crabs. Despite the accumulation of substantial knowledge about the biological and chemical properties of lectins, relatively little is known about their role in nature. In plants, sugar transport or storage, seed germination, cellular division or differentiation and nitrogen fixation may be facilitated by the presence of lectins. In addition, they may play a role in

defense of plants or animals against microbial attack.

Lectins have been extensively utilized as cell surface probes or agglutinators by virtue of their interaction with specific carbohydrate determinants on cell surfaces.⁵ Other lectins that are mitogenic or cause cell agglutination have found a major role in immunology and blood typing. Investigations with lectins have indicated that the occurrence of cell agglutination is markedly different between normal and malignant cells.⁶ The ability of a lectin to bind with carbohydrate antigens expressed by neoplastic cells has led to their use to study cell surface changes that occur during malignant transformation.^{6, 7}

The affinity of lectins for carbohydrate antigens expressed by certain malignant cells has led to their use as agents to target neoplasms *in vivo*⁸ (Figure 1). Lectins have been used in animals as carriers for the delivery of chemotherapeutic agents to tumors. For example, concanavalin A (con A) will selectively agglutinate and kill tumor cells *in vitro* and can increase the life span of tumor bearing mice. The injection of a con A-chemotherapeutic drug complex has been found to be more effective for treatment of tumors in animals than injection of either the lectin or anti-tumor drug alone.

A number of lectins are cytotoxic for tumor cells. Abrin and ricin are highly toxic to tumor cells and the toxic A chain of ricin conjugated with an appropriate anti-idiotypic antibody has been used for the killing of myeloma cells that express IgM and IgD receptors of unique idiotypes. In addition, con A and the egg lectin from the frog *Rana japonica* are directly toxic to malignant cells. Concanavalin A, peanut lectin (PNA) and alectin A have antitumor effects that probably involve immunologically mediated mechanisms. Concanavalin A has a demonstrated antitumor effect if premixed with tumor cells and BCG prior to inoculation into tumor bearing animals and alectin A inhibits the growth of intraperitoneal tumors in mice. Peanut lectin inhibits tumor growth in animals if it is premixed with tumor cells that have been pretreated with the enzyme neuraminidase and mixed together with BCG prior to injection.

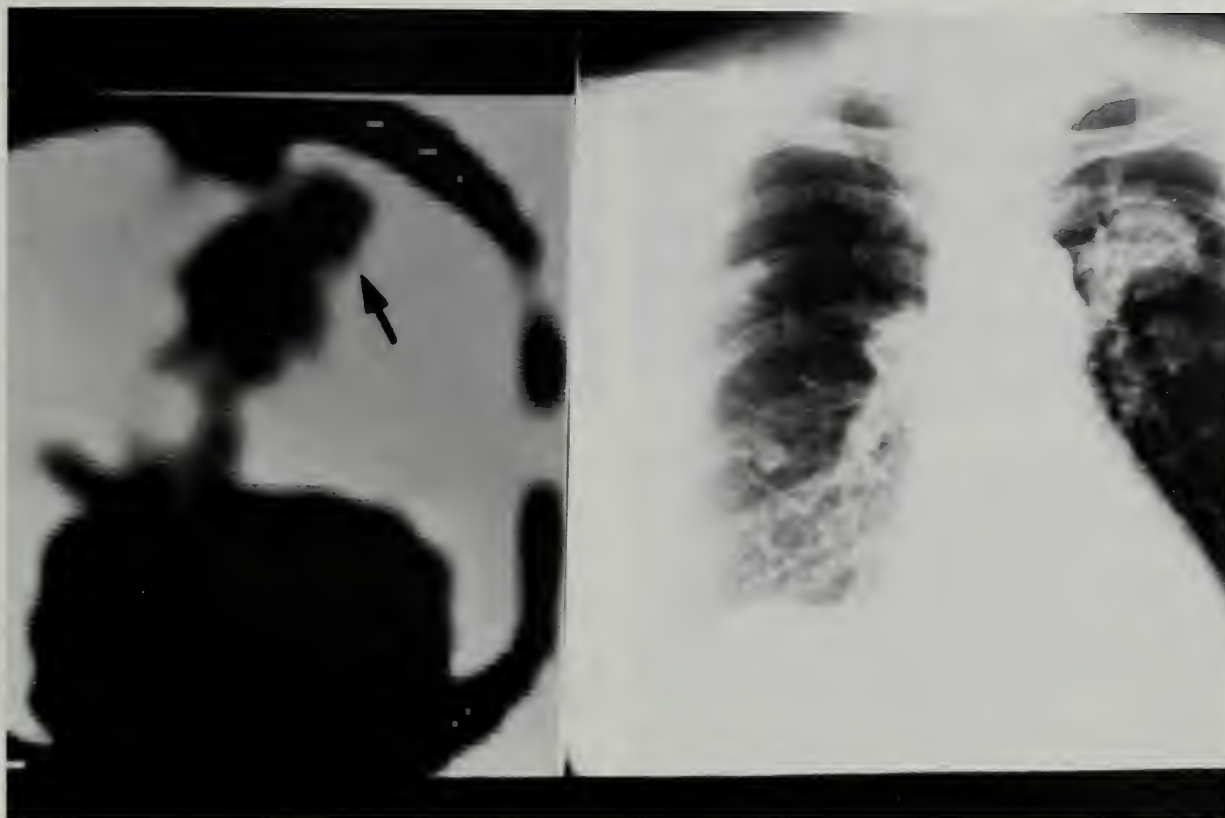


FIGURE 1. Radioiodinated peanut lectin (iodo-PNA) has been administered to a patient with metastatic cancer of the breast. The scintiscan (left) demonstrates localization of the iodo-PNA in a metastatic lesion extending from the mediastinum, shown on chest x-ray (right).

It would appear that some lectins have the advantage of tumor localizing or cancer treatment properties. However, the clinical use of some lectins may be limited by their toxicity. For example, Con A is a powerful mitogen and produces an immune response and alectin A binds to normal serum proteins. However, the use of lectins in man is encouraged by the recent results of a tumor detection trial which showed that intravenously administered, radioiodinated, PNA permitted the inconsistent detection of a neoplasm in several patients with metastatic cancer that expressed the Thomsen-Friedenreich antigen ("T" antigen), without adverse effects.⁸ Heterogeneous expression of "T" antigen in the tumor mass in these patients was believed to account for inconsistent tumor localization of the PNA.⁸

TUMORICIDAL DYES

Fluorescent dyes, including hematoporphyrin derivative (HpD), phthalocyanines of acridine orange can be utilized in the pho-

todynamic therapy of cancer.⁹ Photodynamic therapy involves the injection of a fluorescent dye, which may localize preferentially or be selectively retained in the neoplasia, and subsequent excitation of the dye by laser light of appropriate wavelength. Light activation of these dyes kills tumor cells by the occurrence of a photodynamic action involving singlet oxygen production.⁹ The mechanisms of preferential localization of the HpD or other dyes remain poorly understood and a major side effect of this therapy is lingering photosensitivity of the patient due to the slow clearance of HpD.

Utilizing HpD and red light (wavelength 630 nm), delivered interstitially, it is possible to interrupt the growth of highly anaplastic neoplasms¹⁰ (Figure 2). When a neoplasm that has been pretreated with HpD is illuminated with light of wavelength 4070Å salmon pink fluorescence of neoplasia is observed, whereas adjacent benign tissue appears grey in color.⁹ This fluorescence has been used in the diagnosis of neoplasia in the lung, bladder and

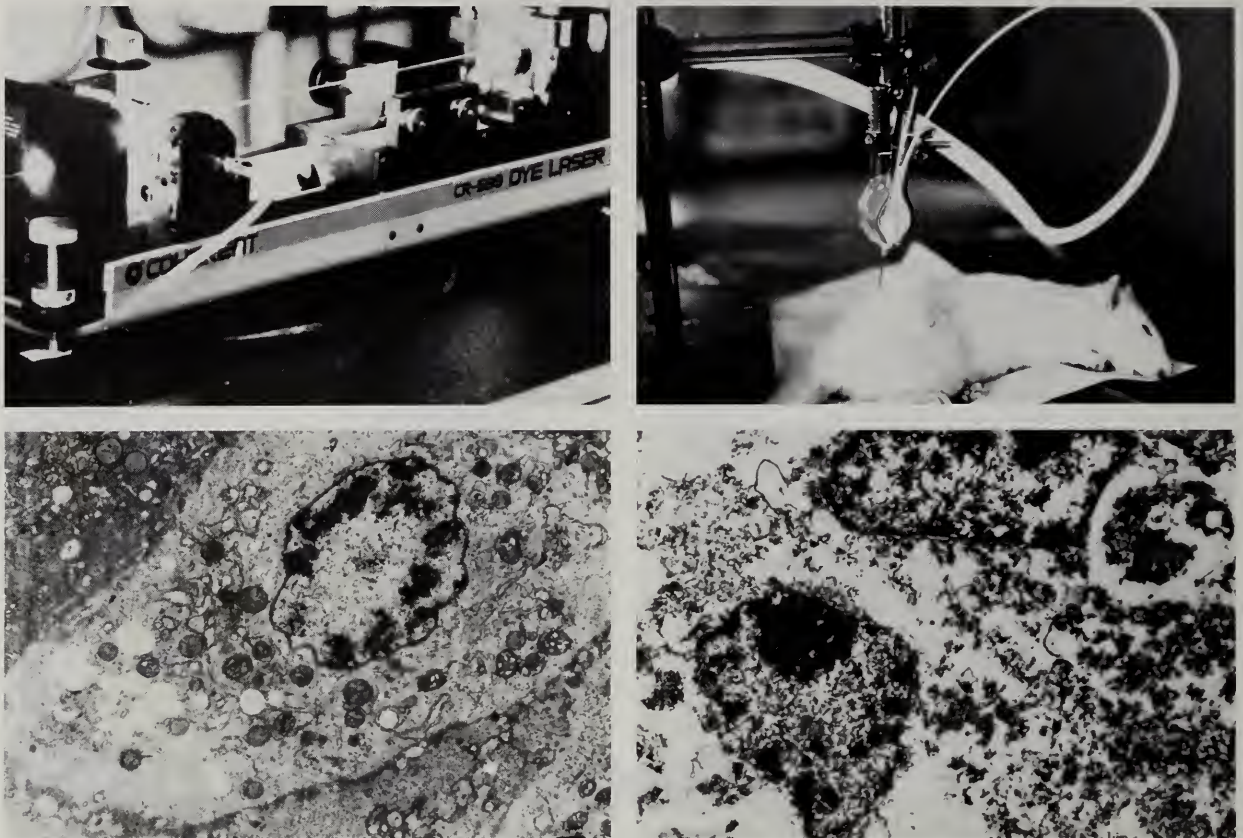


FIGURE 2. The dye laser pumps light at wavelength of 630 nm (top left) which is delivered through fiberoptic light cable placed interstitially into a malignant hepatoma growing in the flank of a rat (top right). A low power electron micrograph of the hepatoma prior to photodynamic therapy (PDT) is shown (bottom left) with a micrograph after PDT showing a dramatic tumoricidal effect with cellular disruption and cross-linking of membranes (bottom right).

gastrointestinal tract by modifying light delivery and fluorescent detectors to be used during endoscopy.

The use of photochemicals has the potential for normal tissue damage, systemic photosensitive skin eruptions and normal tissue adjacent to the neoplasm may be severely damaged without accurate timing of dye administration and light exposure. To overcome these problems, the photosensitizer can be modified so that it is more tumor specific.¹⁰ This approach may minimize the side effects of the dye by permitting a reduction in the effective therapeutic dose and less dispersal of the dye throughout the body. By joining or conjugating these tumoricidal dyes with compounds that have an affinity for neoplastic compared with normal tissue, preferential localization of potentially lethal doses of photosensitizer can be achieved in the tumor, while systemic toxicity can be reduced.¹¹ Candidate compounds which could be utilized to make the dye more tumor specific include MCA and lectins.

Monoclonal antibody-HpD conjugates have been successfully utilized as anti-cancer agents in vitro and in vivo to suppress tumor growth in animals. This technique has been termed photoimmunotherapy which has the potential of utilizing the intrinsic treatment properties of the targeting agent (MCA) as well as selective delivery of a tumoricidal photochemical. Further work is required to elucidate the chemistry of dye-antibody conjugation, optimal time of light exposure, light delivery and optimal mode of administration of the conjugated anti-cancer agents.¹¹

CONCLUSION

The potential use of antibodies or lectins as carriers of cytotoxic agents such as drugs, tumoricidal dyes or isotopes in patients with cancer has provided new promise for the management of neoplastic disease. However, the selective targeting of malignant disease in this manner has resulted in variable and sometimes limited success. A number of factors

have limited the clinical use of antibodies for radioimmunoimaging or therapy. Such factors include insufficient specificity and affinity of an antibody for a tissue associated antigen, lack of access of tumor antigenic sites due to blocking by host derived antibody and the presence of free tumor antigen that will bind the exogenous antibody. Continuing research is required to determine if MCA and lectins or other novel agents, such as tumoricidal dyes, can overcome some of these problems for tumor targeting. □

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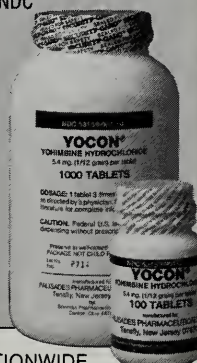
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

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KAPOSI'S SARCOMA

PAUL H. O'BRIEN, M.D.*

Kaposi's Sarcoma has been described for over a century. The original description by Kaposi was of an "idiopathic multiple pigment sarcoma" in Vienna in 1872. In the original description, the pathophysiology was described as a development of macules within a "stocking" distribution of both lower extremities. The lesion grew centripetally, coalescing and spreading to pelvic and abdominal viscera. This progression generated the demise of the patient, usually over a rather lengthy period of time.¹ Kaposi's Sarcoma has been considered a very rare disease, however, it was observed in 1950 that the disease "is more common than the literature would indicate. Undoubtedly, many cases throughout the world are unreported and unrecognized." The total volume of Kaposi's Sarcoma that had been reported by 1950 was estimated to be about 600 patients.²

Over a period of 15 years (1950-1965) the number of patients with Kaposi's Sarcoma seen at Memorial Sloan-Kettering roughly doubled. Thus, there was a marked increase in incidence of Kaposi's Sarcoma prior to the onset of the Acquired Immunodeficiency Syndrome (AIDS). In the 50s and 60s it became quite apparent that there was an enormous incidence of Kaposi's Sarcoma among the African Bantu.³ This is a more aggressive type of Kaposi's Sarcoma than was described in Europeans and patients of Mediterranean origins. The areas of Africa which had documented high incidences of Kaposi's Sarcoma represented the ancestral home of American Blacks. Prior to the marked increase in incidence and documentation of AIDS, Kaposi's Sarcoma in Blacks in the U.S.A. was a great rarity. The great majority of the reported cases were felt to be of Jewish and Mediterranean European ethnic groups. The diversity of ethnics which did seem to cluster attacks of Kaposi's Sarcoma in the past, confused rather than identified a ra-

cial or genetic origin.

Association of Kaposi's Sarcoma with other cancers, and/or lethal infections was first observed in a 1966 summary report from Memorial Hospital, of 63 patients with Kaposi's Sarcoma. There were 18 who died of a second malignancy. Then and now, the clinical presentation of Kaposi's may be as a solitary lesion or with multiple primary lesions which may indeed include any area of the body.⁴ The natural history of Kaposi's Sarcoma recorded prior to its association with AIDS was a rather indolent course. The 28 percent of patients with Kaposi's Sarcoma who developed a second primary cancer are listed below in Table 1.

TABLE 1
Eighteen of 63 Patients
Who Died of a Second Carcinoma

<i>Cause of Death</i>	<i>No.</i>
Hodgkins Disease	5
Lymphosarcoma	3
Carcinoma colon	3
Carcinoma breast	1
Multiple myelanoma	1
Malignant melanoma	1
Carcinoma prostate	1
Carcinoma tongue	1
Carcinoma tonsil	1
Carcinoma pancreas	1

The mortality from the second primary cancer was a greater threat to life than the mortality of the initial Kaposi's Sarcoma. The average survival time from the initial diagnosis of Kaposi's Sarcoma until death from a secondary cancer was seven years.

Surgery was originally utilized for the rare patient with the isolated lesion and of course for the acquisition of tissue for diagnoses. Ra-

* Department of Surgery, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S. C. 29425.

diation therapy was felt to be the treatment of choice for localized Kaposi's Sarcoma and to inhibit the slow indolent centripetal pattern of growth. Radiation therapy is known to be particularly effective in relieving pain from Kaposi's Sarcoma. While the majority of patients will show at least a partial response; that is approximately a 50 percent reduction in size, the lesions rarely disappeared post radiation therapy.⁵

Epidemic Kaposi Sarcoma is now seen frequently with Acquired Immunodeficiency Syndrome. Infection with HIV generates a profound deterioration of cellular immunity and subsequently makes the patient vulnerable to opportunistic infections and neoplasms. The most frequent of the neoplasms is Kaposi's Sarcoma. The Kaposi Sarcoma seen in this setting is referred to as Epidemic Kaposi's Sarcoma. What was a rare and exotic sarcoma has become a very common entity. Other mechanisms of diminishing cellular immunity are the steroids and/or cytotoxic drugs. Patients receiving these drugs have been noted to have an increased incidence of Kaposi's Sarcoma and such lesions have resolved spontaneously by reducing or ceasing the use of these immunosuppressive medications.^{6, 7}

The association with AIDS is most dramatic with 40 to 50 percent of homosexual AIDS patients ultimately developing Kaposi's Sarcoma. This is in marked contrast to the much lower incidence of AIDS seen in heterosexual patients, i.e., eight to 10 percent. This data would seem to imply a transmissible agent in the homosexual community which is vital for the genesis of Epidemic Kaposi Sarcoma.

The natural history of Epidemic Kaposi Sarcoma is variable but very much compacted from the more classic description described previously. Median survival time from an initial presentation of Kaposi Sarcoma without an opportunistic infection is 12 to 18 months. The major cause of death in AIDS patients with Kaposi Sarcoma is opportunistic infection. Kaposi Sarcoma may be the cause of death in the rare patient wherein there is extensive pulmonary infiltration by the Kaposi Sarcoma. The effectiveness but rather slow paced response of radiation therapy has generated studies for other types of therapy. Recombi-

nant interferon alfa-2a has been used as helpful for AIDS and also considered a reasonably appropriate agent in the therapy of Epidemic Kaposi Sarcoma. Response rates varying from 32 percent to 50 percent have been reported. For the patient with Epidemic Kaposi Sarcoma and a history of previous opportunistic infections the predicted survival time is only six to eight months. Palliative treatments for such patients is probably best delivered with chemotherapy. The drugs that have been used extensively in the past are Vinblastine, low dosage bleomycin, and etoposide.

The change in the incidence of Kaposi's Sarcoma and its pathophysiology have initiated many efforts into identifying the cell of origin and the mechanisms which generate its successful growth and invasion. It has been very difficult to maintain long term cultures of Kaposi Sarcoma cells in vitro. No genomic sequences of human Immunodeficiency Virus Type I have been found in Epidemic Kaposi Sarcoma tissues. Nude mice inoculated subcutaneously with Kaposi's Sarcoma cells generate angiogenic lesions. The histologic dissection of these lesions shows results very similar to those seen in human Kaposi Sarcoma lesions. The Kaposi Sarcoma involved with AIDS may develop from cells of vascular or lymphatic origin induced by a factor from infected lymphocytes. These generated cells of the Kaposi Sarcoma cells then produce factors which further stimulate the growth of diverse cell types and suppress cell functions which ordinarily inhibit tumor growth. Gallo and colleagues have successfully cultured AIDS derived Kaposi Sarcoma cells in nude mice, and identified a growth factor that supports the growth of Kaposi Sarcoma cultured cells. From these recently developed findings, one might generalize about the pathogenesis of AIDS associated Kaposi Sarcoma. HIV infected lymphocytes induce cell of vascular or lymphatic origin to transform, replicate, and support Kaposi Sarcoma lesions. These observations are basic and might well lead to more effective and rational treatment of Kaposi's Sarcoma in AIDS patients; and in the relatively uncommon Kaposi Sarcoma found unassociated with AIDS.^{9, 10}

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PHYSICIAN RECOGNITION AWARDS

The following SCMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned.

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SOUTH CAROLINA NEEDS A POPULATION-BASED CANCER REGISTRY*

SHIRLEY J. THOMPSON, PH.D.
WILLIAM F. SCHMIDT, M.D., PH.D.
CAROLINE A. MACERA, PH.D.

We know that 6,141 South Carolinians died of cancer in 1988. At the present time, however, we can only guess how many South Carolinians were actually diagnosed as having cancer in any year. We know that a large number of cancer cases in small areas of rural South Carolina are often reported to local health authorities. We have no scientific basis for determining if the cancer rates for these special areas are truly increased or if the increased cancer incidence is purely a statistical anomaly. We know that more than 32 million gallons of highly radioactive liquid waste are stored and thousands of cubic yards of low level radioactive solid waste are buried at the Savannah River Nuclear Power Site. Although public concerns about the health of populations living near nuclear power plants have been voiced almost since the opening of the first plant, at this time we have no valid data base that will answer legitimate questions as to the safety of the Savannah River Site. We know that minority populations in South Carolina suffer from significantly increased deaths from certain types of cancer. At the present time, we can only speculate as to whether these increased death rates reflect poor access to medical care, greater exposure to carcinogens, or other factors. We know that diet and lifestyle factors may be changing in South Carolina with the expansion of health education programs. But we cannot evaluate whether such programs have a real impact on the incidence of cancers in the state. Solving these puzzles depends upon a valid, population-based data system that does not yet exist in

South Carolina. The creation of a statewide, population-based tumor registry could provide both the mechanism and the data necessary to address these issues.

THE POPULATION-BASED REGISTRY

A population-based cancer registry provides for the collection, storage, analysis, and interpretation of data on all newly diagnosed cases of cancer occurring in a population of well-defined composition and size. The defined population base (South Carolina) distinguishes this type of registry from a hospital-based registry which deals only with those patients seen in that particular hospital, making it impossible to calculate cancer rates that can be applied to the whole population.

An old argument against cancer registries is that most of their functions could be carried out by State Vital Statistics Divisions using death certificates. While mortality data are important, incidence rates are necessary for the success of cancer prevention and control programs. Since cancer is recorded on death certificates only when it is ascribed as a cause of death, and since survival time and cure rates are increasing with improved treatments, mortality data give biased *underestimates* of the incidence of most cancers today.¹

Currently, there are 23 population-based registries in the United States which complement 11 federally funded Surveillance, Epidemiology and End Results (SEER) registries.^{2, 3} None of these tumor registries include data from South Carolina. Unlike venereal disease and certain infectious diseases, cancer is still not a reportable illness in South Carolina. In fact, South Carolina is one of only 14 states in which there is no mandatory reporting of cancer cases. Clearly the first step in creating a population-based registry in South Carolina would be mandatory reporting of all new cancer cases.

* From the Department of Epidemiology and Biostatistics, School of Public Health, University of South Carolina (Doctors Thompson and Macera) and the Department of Pediatrics, University of South Carolina School of Medicine (Dr. Schmidt). Address correspondence to Dr. Thompson at the Department of Epidemiology and Biostatistics, USC School of Public Health, Columbia, S. C. 29208.

HOW PHYSICIANS, PATIENTS AND THE PUBLIC CAN BENEFIT FROM A REGISTRY

A population-based cancer registry would contribute to cancer prevention and control activities in South Carolina in numerous ways. Data from the registry could be used to:

- (1) provide current information on incidence of cancer by age, sex, race, and histologic type for geographic areas and for the state as a whole, allowing for the identification of high risk groups and urban/rural differences;
- (2) examine time trends and changes in the pattern of disease distribution as there are changes in risk factors or medical practices within the state;
- (3) identify high risk groups exposed to occupational, industrial, general environmental and other carcinogens;
- (4) identify geographic clusters of cancer and conduct appropriate followback studies;
- (5) serve as an early warning signal when several cases of a rare cancer appear unexpectedly, alerting the community to new carcinogens in the environment;
- (6) determine risks of a second malignancy following treatment for a primary cancer (such as the potential for increase in leukemia in women who have been successfully treated for ovarian cancer);
- (7) serve as an ideal source of subjects for studies of the relationships of behavioral, medical, environmental factors to specific cancers;
- (8) provide incidence and prevalence information for determining appropriate subjects for the conduct of clinical trials using new treatment modalities;
- (9) evaluate the effectiveness of prevention programs directed at changes in such behaviors as smoking, alcohol and fat consumption;
- (10) evaluate the effectiveness of screening programs such as the "Pap smear" or the "occult blood test" for identifying disease in its preclinical state;
- (11) determine variations in incidence between regions by stage of disease for major cancers such as cervical, breast and colon where early diagnosis and treatment makes a difference in survival; and

to help place services where they will be most accessible to the populations at high risk for these cancers.

The constraints of cost and data acquisition represent major challenges to the development and maintenance of population-based cancer registries today. It has been estimated from the SEER registry that it costs approximately \$100 to record each new case. However, it has also been estimated that each new case of cancer costs approximately \$40,000 to treat. If it is true that an ounce of prevention is worth a pound of cure, then the creation of a cancer registry that could be used to develop and evaluate new programs in cancer prevention and control is essential. This program would cost only one penny for potential prevention for every four dollars spent for present treatment.

REGISTRY STATUS IN SOUTH CAROLINA

Twelve hospitals in South Carolina have their own American College of Surgeons (ACoS) approved registries which we estimate record approximately 60 percent of the cases of cancer diagnosed for state residents. These hospital-based registries note new cases and follow each person through treatment and outcome (survival and recurrence). The current ACoS-approved hospital registries could provide a sound base for implementation of a statewide registry if they reported information to one statewide central registry. Our challenge is to develop a registry system which will allow oncologists, clinical researchers, epidemiologists, family practitioners, and health policy planners alike to address the cancer problems in the state. As we approach the 21st century, we cannot allow this important public health tool to go unutilized. □

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Editorial

ACCURATE CANCER REPORTING IN SOUTH CAROLINA— A GOAL FOR THE '90's

The special article appearing in this edition of *The Journal*, written by Thompson and colleagues, deals with the need for a Cancer Registry and points up the significant need for the gathering of adequate statistics in order to accomplish not only appropriate epidemiological studies, but also to help in data collection for our patients with cancer in South Carolina. It is obvious that unless the denominator is understood, we cannot have adequate comparisons for care of any particular type of cancer in our state.

As the State Chairman for the American College of Surgeons Cancer Commission, I have been impressed that some of our hospitals have excellent ongoing Cancer Registries but these are, in fact, existing in a vacuum unless we are able to build upon this experience and develop a statewide Cancer Registry. In a similar manner, we must assure that all agencies, both governmental and voluntary, in South Carolina have a common goal of developing, not only the proper methods to collect data but also adequate studies in which to use data effectively. The Cancer Advisory Committee of the Department of Health and Environmental Control has been seeking to increase the awareness of many of our agencies and to develop a potential umbrella organization for both voluntary and governmental agencies to work toward the early detection and treatment of cancer for all of our citizens.

Without an effective statewide Cancer Registry and without the assurance that all cancer cases are reported in an effective manner, the

long-term goal of deriving adequate statistics certainly will be unobtainable. The American College of Surgeons, along with The American Cancer Society, has launched a new program to develop a National Cancer Data Base. This computerized system will allow for the collection of accurate statistics for the entire nation to assess outcomes in the management of cancer care. For many years, the American College of Surgeons has been a leader in developing statistics in order to compare past achievements with the present and future accomplishments in the management of certain solid tumors. It is hoped that the development of the National Cancer Data Base will spur individual states who thus far have inadequate data gathering to achieve statewide registries in order to participate in such an ambitious data gathering exercise. The papers presented in this special edition of *The Journal* all reflect the necessity for adequate statistics and point to the desire that in future special editions we may indeed have a complete and accurate assessment of specific cancer related facts for South Carolina. Without such data, we cannot hope to compare our past achievements and, in fact, to look ahead to our eventual conquests of this dread disease.

FREDERICK L. GREENE, M.D., *Guest Editor*
Department of Surgery
USC School of Medicine
Two Richland Medical Park, Suite 402
Columbia, S. C. 29203

ENVIRONMENTAL CARCINOGENS— PERCIVALL POTT REVISITED

On the cover of this month's special issue devoted to Oncology is Percivall Pott (1713-88) of London who served as surgeon at St. Bartholomew's Hospital from 1744 to 1787 and who distinguished himself by his prolific writings on varied subject matters such as hernias, fractures, head injuries, genito-urinary disease and spinal cord illness. Percivall Pott is perhaps most remembered for his monumental discovery of the association of scrotal carcinoma in chimney sweeps which was the first documented carcinoma arising as an occupational hazard.

Pott was apprenticed to one of the surgeons at St. Bartholomew's Hospital in 1729 and spent his time preparing anatomical subjects for demonstration which proved to be a solid basis for later anatomical and surgical study. In 1744, Pott was elected assistant surgeon and in 1749 he was appointed one of the principal surgeons at St. Bartholomew's Hospital. Following Pott's election to the Royal Society in 1764, his fame continued to spread throughout London and he became not only an extremely busy practitioner, but a very popular lecturer and medical sage.

In 1775, Pott published a treatise which included surgical observations on cataracts, polyps of the nose, different kinds of ruptures and "mortification" of the toes and feet. In this edition, the author also related a case of cancer

of the scrotum in a chimney sweep living in London. Through careful analysis, and as Pott's biographer, James Earle, has written, "reasoning by analogy and induction from established facts," he was able to make the appropriate association between the occupational exposure of a young man with a malignant lesion of the scrotum and the probable effect of chronic exposure to soot or other noxious agents coming from chimneys.

It is certainly appropriate to recognize the contribution of Percivall Pott in the area of the etiology of cancer, especially as we consider the current problems in our own society relative to tobacco usage, nuclear waste, dietary chemical exposure, and other unforeseen noxious agents. Although we struggle daily with the diagnosis and cure of cancer, it is only with the realization of the role of primary prevention and the understanding of cancer causation that we will indeed make a real advance in our battle against cancer as a disease. The lesson of Percivall Pott also shows us that the active practicing clinician may still play a very real and important role in the establishment of new ideas and concepts by using the great powers of observation and association.

FREDERICK L. GREENE, M.D.
Guest Editor



President's Page

PRESIDENT'S INAUGURAL ADDRESS

APRIL 29, 1990

JOHN W. SIMMONS, M.D.

I have a tremendously difficult task. The time available since last year should have made this moment easier and yet I have struggled until the last minute in preparation.

The difficulty is twofold. First, I have to try to express to you the feeling of honor and gratitude I have for the opportunity to be your President. I feel that neither my pen nor my words will be adequate for the appreciation I wish to express. Please accept the attempt I make and know that I consider it a high honor.

Secondly and equally difficult are the views and concern and opportunities I want to discuss with you in the next few minutes as we consider together the next decade in health care. We have to accept the fact that this decade will produce a fundamental change in the appearance and function of our healthcare system. Let me repeat by way of emphasis; we will see in this decade a fundamental change in our healthcare system. I want to discuss with you why I believe this will occur and what the response might be from the medical community.

The reason for the change will be the related problems of access, accountability and affordability.

Access may be the easiest to discuss although no less important than affordability and accountability. We have all heard about the 37 million Americans uninsured or underinsured. These people delay seeking health care until small problems are bigger and more expensive problems.

There are population trends that will increase the severity of the access problem especially among the aged. From the National Leadership Commission on Healthcare, and I quote, "In the 21st century this issue will loom even larger. The elderly population will double by the year 2025 when one in five Americans will be over 65. There will be three times the present number over 80 for a total of 6.2 million. Since illness and disability rates accelerate after 75, these population trends will demand commitments to geriatric-oriented systems of service. Specifically, acute-care and long-term care must be carefully coordinated. The hospital, nursing home, home care agency and private physician cannot function in isolation."

Many of our citizens presently covered by Medicaid and Medicare have difficulty getting care because of inadequate numbers of physicians willing to see these patients. With the Medicaid patients we have the nauseating problem of physicians who say, "I don't care what the reimbursement is or how reduced the paperwork is I don't want that type of patient in my office running off my 'good' patient." Who are the "good" patients? Are the patients with good commercial insurance and/or ability to pay out of pocket the "good" patients? This group represents only 40% of our population. Are we going to say that we only want to care for that 40%?

The issue of accessibility is clearly related to affordability. Part of the fundamental change will involve providing care to all citizens regardless of their ability to pay or social standing. What is the problem of affordability? Like the 37 million figure for uninsured Americans we have all seen or heard about the \$600 billion dollars a year we spend on health care in the U. S. We have been told that the figure represents nearly 12% of our gross national product. That figure is one which has increased every year for the past several years. Can we allow it to continue or should it continue? The pressure is to slow or stabilize that figure. Federal and state budget deficits argue for decreased

spending. Nongovernment purchasers argue for decreased spending. The cause of the increase needs only brief review for the most part; increased technology, increased demand, aging, are clearly factors. We have others, some in our own house. When a surgeon charges \$700 to remove a skin lesion in less than 15 minutes with a one inch incision and repair with six uninterrupted simple sutures, we have a problem. When a physician charges \$400 to remove a knitting needle by simply pulling it from the finger of an injured person in the workplace, we have a problem.

My point is that we are all stakeholders in the cost part of the equation; physicians, government and demanding patients.

And what about accountability? This subject is subtitled "quality assurance." We all think we practice quality medicine, but claims analysis shows that in some communities a procedure requires a 25% longer hospital stay than in other communities. Some physicians have excessive surgical complication rates. Up to 40% of hospital admissions may be unnecessary; 33% of the surgery may be unnecessary. We have not adequately determined whether or not our diagnosis and treatment yield a functional and socially improved patient.

The demand for quality assurance grows louder. Data is sought which can be shared with the payor and the patient in this process to select a treatment and/or provider. What is the result of all this talk about accessibility, affordability, and accountability?

I believe the result is that we will see a change, a fundamental change, in our healthcare system. What will it be? Many proposals are being made. I should like to think the effort of Dr. Brake and the Health Care 2000 Committee is a feasible one. Of particular interest is the section dealing with a basic benefit plan for appropriate care for all citizens. Another section deals with lifestyles and substance abuse. I support the Health Care 2000 plan and I will trust your wisdom when you consider the reference committee report.

An activity in Oregon is also of interest in that an effort is being made to prioritize treatment especially in the Medicaid section. The bright spot here is that the state and its citizens are attempting to set the priorities. The appropriateness of this is that it relieves the physician community of having to be advocates and perhaps rationers at the same time.

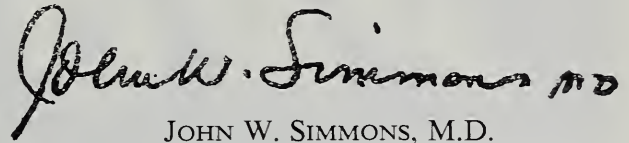
Other solutions involve renewed interest in managed care, direct contracting and integrating systems with hospitals and physicians in the same system. Of great interest to me is a program announced on March 7, 1990, by the American Medical Association, entitled, "Health Access America." There are several fundamental principles in that program. Number one, improvements in the American healthcare system should preserve the strengths of our current system. Number two, affordable coverage for appropriate healthcare should be available to all Americans regardless of income. Number three, particular efforts are needed to assure continued access by the elderly to affordable healthcare services. Number four, healthcare services should be delivered with high quality at appropriate cost. Number five, patients should be free to determine from whom and the manner in which healthcare benefits are delivered. Six, all physicians should be committed to the highest ethical standards in the delivery of care. That program goes on to list some 16 specific recommendations which would significantly improve our healthcare system in line with the fundamental way I have been discussing, and I think that program will deserve our careful attention in the coming year.

As we debate these issues in the first year of this decade I plead with you to secure an opportunity for organized medicine to be at the discussion table. We simply cannot opt out. I repeat my earlier conviction that a fundamental change will occur this decade. We simply cannot resist that change and have a further erosion of our credibility. To do so lessens our opportunity to be at the table.

As we debate these issues and as we participate with others I encourage you to do some very specific things. Number one, try to secure immediately in your communities an opportunity for every person to be seen for diagnosis and treatment regardless of their ability to pay. The Legislature can quickly remedy this problem of inadequate access, and a hastily mandated solution by the Legislature may not fit with what the fundamental changes should be. Secondly, I encourage you to avail yourself of the opportunities to understand what health policy thinkers in Washington are

discussing. Much of that information comes from the Physician Payment Review Commission. Others are coming from some of the major institutions with people like Paul Ellwood and Uwe Rhinehart along with others leading the discussions. Leadership in this decade will depend on extremely well informed physicians.

Again, I appreciate the opportunity to serve as your President. My approach will be one of service more than leadership. My gratification for the chance is immeasurable and I look forward to the coming year.

A handwritten signature in dark ink, reading "John W. Simmons, M.D." with a stylized flourish at the end.

JOHN W. SIMMONS, M.D.
President

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Mrs. Lewis N. Terry
President-Elect

Auxiliary Page

AUXILIANS: BLOOM WHERE YOU ARE PLANTED!

Having been a medical spouse for 31 years, medical auxiliary has been a very important part of my life. I am very excited about being your President this year and I hope you will share this excitement with me. I hope this will be a rewarding experience for all of us.

We live in a world which constantly bombards us with changes that touch all our lives. In the area of health care this is particularly true. The auxiliary is an organization that is ready to meet these new challenges through our leadership skills. We must enhance our knowledge with reliable information in the area of health care and health education. We are united, with a unified vision of our organization and its goals. We are one of the most recognized volunteer organizations in the nation. We stand ready to make a commitment to the challenges and opportunities that will lead us through the '90s and beyond into the next century.

We have the opportunity to share and learn from each other. We have the opportunity to appraise where we have been and where we are going so that we can continue to grow. We must look at the long term, including our interpersonal relationships among our members, and find ways to strengthen our membership. Each of us works hard. We are risk takers, but from calculated risk we can bring accomplishments. Because we are here we have already made the decision that we are going to make a difference and live a meaningful life. It takes innovative thinking, unity of action and bold goals and objectives for the future to make the difference. We are not just the bricks and mortar but the foundation on which to build for the future.

Through our health projects such as our health education van and our numerous county health projects, we increase the visibility and present a positive image of the medical community as well as improve the quality of life in our state. Our work in the area of health projects and programs that we each do as volunteers is impressive. The value of our services in providing infant safety seats, bras for mastectomy patients, furnishing a room for abused children, providing parenting workshops, teaching programs about substance abuse such as "I'm Special to Children," and providing consumer health information is immeasurable, and these are only a few examples of services auxiliarians provide to this state.

Our medical community can make its voice heard loudly on issues that affect medicine by voting for the candidate of our choice—it is our responsibility! Never before has medicine been under attack as it is now. The present practice of medicine is changing. No one knows what the future will hold and so it is critical that the medical community have a strong input into the future of medicine.

Through our efforts in fundraising, particularly the sharing cards, we help to ensure quality education in the field of medicine as well as continued research which can lead to remarkable discoveries that will benefit us all. We must continue to recognize and meet the needs of others.

Along the road of change, opportunities and challenges, we must remember to take the time to love, for that is what it is all about. Love is often expressed through flowers. Through the medical auxiliary we are able to sow the seeds of health throughout our state. It is my sincere wish that you will bloom where you are planted and when we gather together next year we will have made our state a more beautiful place.

MRS. LEWIS J. TERRY (BETSY)
President, 1990-1991

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INTERVENTIONAL TREATMENT FOR VENTRICULAR ARRHYTHMIAS: THE INITIAL SOUTH CAROLINA CASE*

DAVID STEWART, M.D.

NANCY FINCH, R.N.

JOHN KRATZ, M.D.

ROBERT B. LEMAN, M.D.**

The management of patients with sustained ventricular tachyarrhythmias has become a significant medical issue in recent years. It has been estimated that 200,000-400,000^{1, 2} incidents of sudden cardiac death occur annually in the United States alone and are caused most often by ventricular tachyarrhythmias. With the development of excellent emergency medical services, more patients survive sudden cardiac death and present to practitioners for management. These patients are typically characterized by depressed left ventricular function and have significant coronary disease. Many antiarrhythmic drugs are available, yet empiric or Holter directed drug therapy yields unsatisfactorily high recurrence rates.³ The CAST trial even presented more frightening results because a group of patients which showed control by Holter monitoring actually had an increase in sudden death.⁴ With the

development of intracardiac electrophysiological testing, analyzing the effectiveness of arrhythmia suppression by various antiarrhythmic drug regimens has become possible and more effective. However, these arrhythmias may be extremely refractory to any medical management particularly with this technique because of its sensitivity. The development of the automatic implantable cardiac defibrillator (AICD) represents a significant advance in the management of these patients, providing improved survival rates for a medical problem with an otherwise dismal prognosis.^{5, 6} Pacemakers which control tachycardia have been developed but, because they can accelerate the arrhythmias, have been limited to experimental usage with ventricular arrhythmias. We present here the clinical course of a patient with coronary disease and refractory ventricular tachyarrhythmias who was the first patient in South Carolina to receive both an antitachycardia pacemaker and an AICD.

CASE REPORT

A 66-year-old Caucasian male, while sitting in a restaurant, suddenly developed palpitations, diaphoresis, and angina. He went to an EMS station and was subsequently transferred

* From the Division of Cardiology, Department of Medicine, and the Gazes Cardiac Research Institute (Dr. Stewart, Ms. Finch, and Dr. Leman) and the Division of Cardiothoracic Surgery, Department of Surgery (Dr. Kratz), Medical University of South Carolina, Charleston, S. C.

** Address reprint requests and correspondence to Dr. Leman at the Division of Cardiology, Department of Medicine, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S. C. 29425-2221.

to McLeod Regional Medical Center where he was found to be in ventricular tachycardia (VT). He remained conscious and sinus rhythm was restored after a lidocaine bolus. He was referred to the Charleston VA Hospital for evaluation and treatment of recurrent VT. He had suffered an inferior myocardial infarction 25 years ago and a non-Q wave myocardial infarction in October of 1987. Cardiac catheterization then showed a dilated left ventricle with an akinetic posterior wall and an ejection fraction of 28%. Coronary angiogram showed a 40% narrowing of the left anterior descending artery, a normal circumflex artery, and 100% occlusion of the right coronary artery. A stress thallium test with scintigraphy showed an inferior scar. Since then, there have been repeated episodes of documented VT with associated angina, diaphoresis and near syncope. A combination of tocainide and quinidine was unsuccessful in suppression of these episodes. His medications prior to admission included Quinaglute 324 mg q6h, procainamide-SR 750 mg q6h, diltiazem 60 mg tid, Lasix 40 mg qod, digoxin 0.125 mg/day, and topical nitrates. Quinidine and procainamide levels were 2.3 and 4.3 μ /ml, respectively.

Past medical history was unremarkable except for his cardiac history, and a history of 90 pack years of cigarette smoking. Admission physical exam was normal except for a decreased first heart sound. Electrolytes and CBCs were normal except for a serum creatinine of 1.4. An EKG showed sinus rhythm, inferior Q-waves, intraventricular conduction delay, and non-specific ST-T abnormalities. A baseline electrophysiological study off all antiarrhythmic medications induced VT at a rate of 176 bpm after double ventricular extra stimuli. After lidocaine 200 mg IV and procainamide 1150 mg IV, VT was still inducible, although with a slower rate of 120 bpm. Mexilitine was begun but was not tolerated because of a skin rash. Amiodarone was begun, however VT recurred on telemetry and required lidocaine for conversion. Other drug therapies including encainide alone, and combinations of amiodarone with tocainide, quinidine, or encainide were tried. All single and combination drug therapies were unsuccessful in suppressing inducible VT at electrophysiological testing. All episodes of the VT, despite non-

suppression by medication, were easily converted by pacing or electrical cardioversion with small energies (10 to 20 joules). Because of these characteristics of the VT and its frequent occurrence, it was decided that the most beneficial therapy would be implantation of an antitachycardia pacing device. Amiodarone was continued in hopes of decreasing the frequency of VT episodes. An AICD was considered necessary because of the possibility that ventricular pacing may induce ventricular fibrillation (VF).

The patient was transferred to MUSC Hospital for the surgery on 12/29/88. An Intermedics Intertach pacing device and a Ventak AICD were implanted. Pacemaker conversion of VT was successful with double ventricular paced beats at 70% of the cycle length (R to R interval) of the VT (Figure 1). The AICD successfully cardioverted VT and VF with 5 joules and 15 joules respectively (Figure 2). The pacemaker was programmed to initiate ventricular pacing when a heart rate greater than 140 bpm for 10 beats and a sudden increase in the heart rate by a change in cycle length of 72 msec. Its response to these sensed events would be double ventricular paced beats at 70% of the tachycardia cycle length. The Ventak AICD was programmed to charge and defibrillate if a heart rate of 205 bpm or ventricular fibrillation were sensed. Postoperative recovery was without complications. Amiodarone was continued at 400 mg/day. On 1/5/89 the first postoperative electrophysiologic study was performed and, after induction of VT, it was found that double ventricular paced beats would not convert the tachycardia which had a rate of 160 bpm. The AICD also did not convert it because the rate was below its setting. Therefore, the pacemaker was reprogrammed to initiate four beats at 70% of the sensed cycle length and this format was successful in converting the VT in numerous trials. He was discharged on 1/6/89. On 2/3/89, the devices were interrogated and found that the criteria of high rate and sudden onset had been reached a number of times and antitachycardia pacing was performed 10 times over the preceding month. There were no electric shocks delivered to the patient by the AICD. On 4/10/89, high-rate and sudden-onset criteria were both met numerous times

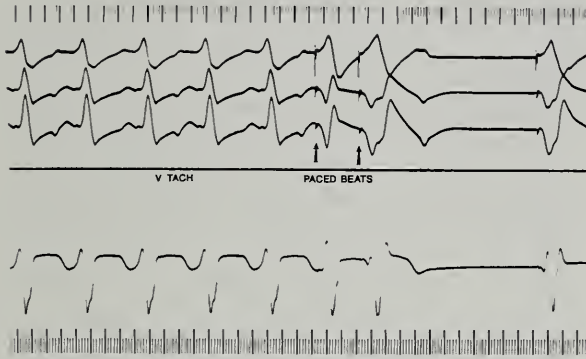


FIGURE 1. This intraoperative EKG, showing three surface leads and one intracardiac lead, demonstrates pacemaker sensing of VT and conversion with two paced ventricular beats. The PM then appropriately fires to give pacemaker support for post-conversion bradycardia.

with antitachycardia pacing performed 252 times over the two-month period. On 5/8/89, the patient was admitted for symptomatic VT which was not controlled by the devices. Holter monitoring was performed on 5/8/89 which showed numerous episodes of VT which were not sensed (Figure 3) or converted by the antitachycardia pacemaker. Further analysis of the VT showed that its rate averaged 93 to 118 bpm, which is below the rate setting on the pacemaker. On 5/9/89, the pacemaker was re-programmed with rate criteria being lowered to 115 bpm for eight beats and the sudden onset criteria changed to 51 msec. The pacemaker response was also changed in that the pacemaker would deliver five beats at 65% of the cycle length. Because it was also thought

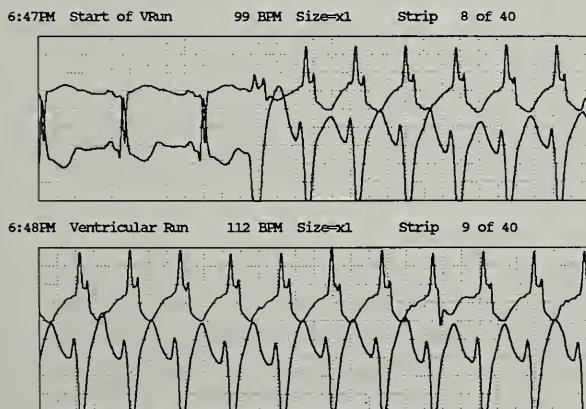


FIGURE 3. This Holter monitor recording shows sinus rhythm (three beats), one fusion beat, and sustained VT (ventricular tachycardia) at a rate of 112 bpm.

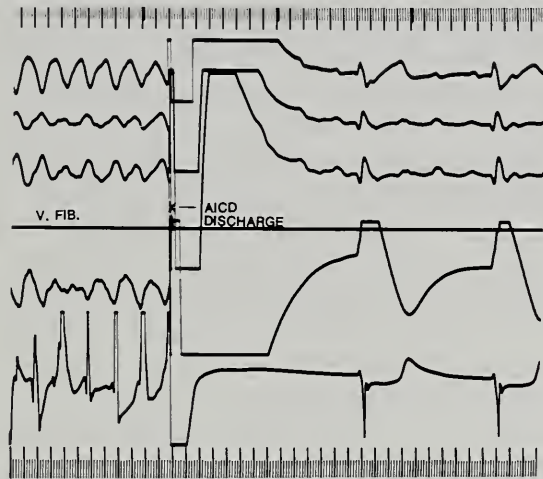


FIGURE 2. This intraoperative EKG, showing three surface leads and two intracardiac leads demonstrates VF (ventricular fibrillation) followed by an AICD discharge with resumption of sinus rhythm.

that accumulation of amiodarone might have contributed to the slowing of the VT, the dose of amiodarone was decreased to 200 mg/d. Repeat Holter monitoring on 5/10/89 showed several episodes of VT with rates averaging 113-135 bpm which were not successfully converted by the pacemaker (Figure 4). The pacemaker response settings were changed to four pulsed stimuli at 55% of the cycle length with repeated Holter monitoring showing successful conversion of VT.

The patient was discharged home but returned three days later with clinical history and AICD interrogation showing that the patient had been shocked three times. The patient had also required antitachycardia pacing 255 times within this short time period. Subsequent

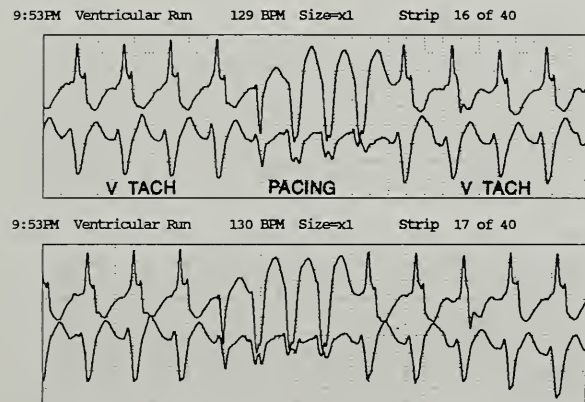


FIGURE 4. This Holter monitor recording shows sustained VT at a rate of 129 bpm which is not converted by four paced ventricular beats.

Holter monitoring showed several episodes of VT which were not successfully converted by the pacemaker. The pacemaker response settings were further adjusted to eight pulses beginning at 70% of the sensed cycle length and each subsequent paced beat was decreased by 23 msec of the paced cycle length. The amiodarone dose was increased to 400 mg/d. After Holter monitoring showed control of VT, the patient was again discharged. Three days later the patient received four shocks and returned to the hospital. The shocks were thought to be secondary to either the pacemaker accelerating the VT or the AICD mis-sensing the antitachycardia pacing as VT. The pacemaker settings were adjusted to six pulses beginning at 70% of the cycle length with a 12.8 msec autodecrement of each paced beat. These changes were initiated to eliminate the possibility of this missensing. The amiodarone dose was increased to 600 mg/d and Lopressor 25 mg twice daily was added to his medical regimen. The purpose for adding the beta-blocker was to suppress any catecholamine activity which might have been contributing to the acceleration of the VT. With this medical regimen and current pacemaker settings, a Holter monitor revealed complete control of his arrhythmias (Figure 5). Over the last four months since these manipulations were made, the patient has done well, using the antitachycardia pacemaker for a total of 64 times without receiving any shocks. His total post-operative course has now spanned 11 months at the time of this writing.

DISCUSSION

The clinical course of this patient serves to bring out several important points regarding the management of patients with arrhythmias. First, multiple drug regimens can be shown truly effective by serial electrophysiological testing in only 20-30% of the cases^{3, 13, 14} with significantly improved survival in those so treated, but still with 11% incidence of sudden death over follow-up periods of 18 to 26 months.^{7, 8, 15} Even the introduction and widespread use of amiodarone has not sufficiently resolved this problem. Second, although the AICD is the most effective way to prevent sudden death, 98% survival at one year and 96% at five years,^{7, 9, 10} there are problems with

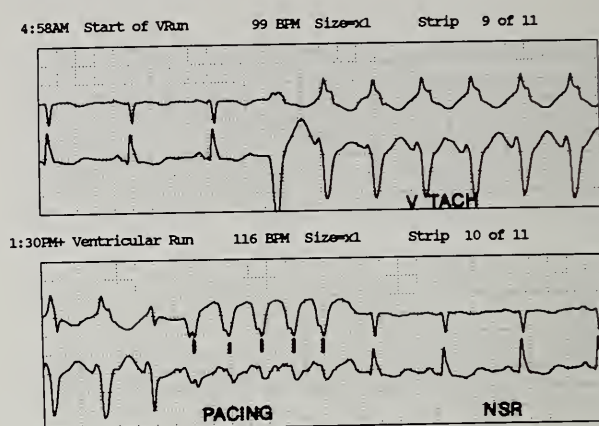


FIGURE 5. This Holter monitor recording shows three sinus beats, one fusion beat, and sustained VT which is converted to sinus rhythm with 5 paced ventricular beats.

this form of therapy: (1) the shock makes the patient feel like he is being kicked in the chest, (2) the device is large and presently cumbersome to place requiring significant surgery, (3) the finite number of possible shocks is a limiting factor in a patient with recurrent ventricular arrhythmias, and (4) the overall expense of the device.

Antitachycardia pacing can control some arrhythmias but its use may cause acceleration of VT and subsequent hemodynamic compromise. The antitachycardia pacing has been shown to be effective therapy for a re-entrant arrhythmias¹¹ and some pacemakers have had FDA approval for treatment of supraventricular arrhythmias. Investigational protocols of pacing are ongoing for the treatment of ventricular arrhythmias because of the hazard of the pacemaker-induced acceleration of the arrhythmias and causing VF.¹² Pacemaker therapy appears to be most appropriate for the slower arrhythmias and those which have been shown to respond to simpler pacing techniques. Finally, an ideal device which would have the capability of pacing the patient out of an arrhythmia or shocking a more severe arrhythmia is being investigated by numerous corporations. Our use of two devices was the only method available and this technology is costly. The combination of antitachycardia pacemaker and an AICD can have significant interaction. They must be carefully monitored and adjustment of various parameters may need to be undertaken so their efficacy can continue. This interaction can cause major

problems such as inappropriate shocks caused by the antitachycardia pacing activating the AICD. This probably occurred in our patient and was corrected by slowing the decremental rate and the amount of pacing. Although this costly complex treatment was undertaken in this patient, the effectiveness has been remarkable. This patient who previously had numerous ER visits and long hospitalized care is now able to lead a normal lifestyle.

In summary, the implantation of anti-tachycardia pacing devices and automatic implantable cardiac defibrillator devices represents a manageable treatment modality for refractory life threatening ventricular tachyarrhythmias. □

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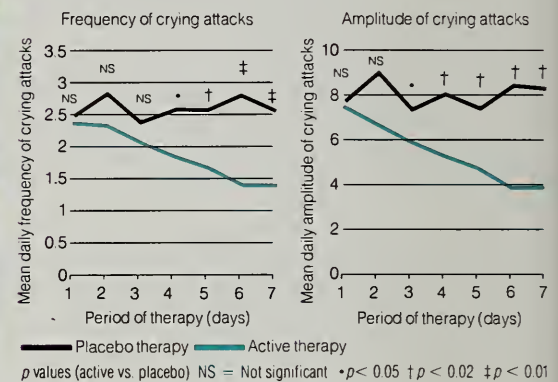
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1. Kanwaljit SS, Jasbir KS. Simethicone in the management of infant colic. Practitioner. 1988;232:508.

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IMPROVING SURVIVAL IN THE BURNED PATIENT

DABNEY R. YARBROUGH, III, M.D.*

Burn injuries continue to be a significant public health and medical problem in South Carolina: 971 hospitalizations due to burns were reported in 1986 with 23 deaths. In 1987 there were 172 fire-related deaths while 164 such deaths were recorded in 1988. South Carolina is reported to have the nation's tenth highest death rate due to fires.¹ Progressive improvement in the survival of burned patients has been recorded by most burn centers over the past 20 years.²⁻⁵ Factors presumably related to this increased survival include the availability of more effective topical antimicrobials, more effective antibiotics, improved critical care technology and improved wound care techniques.^{2, 4}

An analysis of data from the Medical University of South Carolina (MUSC) burn service over the eight-year period 1981-88 demonstrates this same encouraging increase in survival in patients treated on the MUSC burn service. The survival data reported in this article were derived from that analysis.

MATERIALS AND METHODS

The MUSC Burn Unit is a 10-bed unit for the care of adult burned patients. The unit includes a four-bed intensive care area with two isolation rooms as well as three semi-private intermediate care areas. Additionally, patients with minor burns and patients in the final stages of recuperation are often admitted to areas on the general surgery service.

All adult burned patients are treated by the author as medical director of the Burn Service. Pediatric burned patients (patients less than 16 years of age) are cared for in a separate pediatric surgical facility.

Patients with moderate and major burns are initially admitted to the Burn Intensive Care Unit where resuscitation is carried out using

the modified Parkland or Brooke formulas for fluid resuscitation. Subsequently, relatively conservative management of the burn wound is practiced.

Surgical excision and debridement of burn wounds is usually delayed until approximately the tenth postburn day. The patient's burn wounds are cleansed and conservatively debrided once or twice daily and topical antimicrobials (Silver Sulfadiazine, Mafenide Acetate) are applied. This is continued until partial thickness wounds are healed and full-thickness wounds are ready for grafting. Cadaver skin, heterografts and "skin substitutes" are infrequently used. Exceptions to this conservative approach to wound management include burns of the hands, electrical injuries and limited-extent, deep burns.

For this study the charts of 901 burn-related admissions during an eight-year study period from 1981-88 were reviewed. For purposes of comparison data from the years 1981-1983 and 1984-1988 were reviewed and analyzed comparatively.

RESULTS AND DISCUSSION

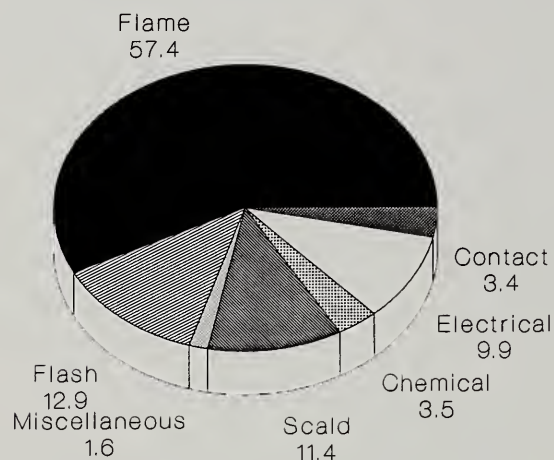
77.5% of patients admitted to the MUSC burn service during the study period were males and 22.5% were females. The cause of burn was categorized as flame in 57.4% of cases, flash in 12.9% of cases, scald in 11.4% of cases, contact in 3.4%, electrical in 9.9%, chemical in 3.5% and miscellaneous in 1.6% (Fig. 1). There were a total of 342 admissions during 1981-1983 and 559 admissions during 1984-88. The average age of patients admitted in the 1981-1983 period was 38 years, the average per cent burn was 30.1%, average third-degree burn was 14.2% and the average length of stay was 36 days. The overall survival rate was 87.6% for the 1981-83 period.

During the 1984-1988 period the average age was 40 years, average per cent burn was 26.6%, average third-degree burn was 10.7% and the

* Department of Surgery, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S. C. 29425-2270.

Figure 1.

Causes of Burns MUSC 1981-1988



average length of stay 24 days. The overall survival rate was 91.5% during this study period (Table 1).

Analysis of the data revealed that when survival by per cent burn for the two study periods was examined, little difference in survival was apparent for burns involving less than 50% of the body surface area (BSA) although as Demling has pointed out, survival for patients with burns involving 50% of the BSA has increased dramatically over the past 25 years.⁵

In 1964, burns involving 50% of the BSA in patients 10-30 years of age carried a 50% mortality rate. By 1974 the mortality rate for this group of patients had decreased to 30% and by 1984 some burn units reported mortality rates of less than 10% for these patients.⁵ At the MUSC burn unit during the period 1981-1988

the mortality rate for this group of patients was 0%, i.e. 100% of patients aged 10-30 years with approximately 50% burns survived.

Although, as previously noted, little difference in survival during the two time periods examined was noted in patients with burns involving less than 50% of the BSA (96.7% survival in the 1981-1983 group and 96.2% in the 1984-1988 group); increasing improvement in survival during the 1984-88 study period was noted in each of the succeeding larger burn deciles.

Survival of patients with burns involving 50-59% BSA was 70% in the 1981-1983 group and 85.2% in the 1984-1988 group. In patients with burns of 60-69% of the BSA, 58.3% survived in the 1981-83 period and 68.2% in the 1984-88 period. Patients with burns of 70-79% BSA had a 33% survival in the earlier group and 66.7% in the later group. Corresponding figures for 80-89% BSA burns were 33% survival between 1981-1983 and 74% during 1984-1988. Minimal survival of patients with burns involving more than 90% BSA was noted (0% in the 1981-1983 group and 7.1% in the 1984-1988 group) (Fig. 2).

The overall survival for all patients with burns exceeding 50% of the BSA improved from 52.3% in the 1981-1983 group to 63.6% in the 1984-1988 group. The average per cent burn in the 1981-1983 group was 63% BSA with 36% third-degree and 69% BSA with 38% third-degree in the 1984-1988 group. The average age of the two groups remained the same at 44 years (Table 2).

SUMMARY

Improving survival of burned patients has been reported by the majority of burn units over the past decade. Although many sophisticated studies have attempted to delineate the major factors responsible for this improvement, no single factor has emerged as being clearly dominant.

On the MUSC burn service, increased survival has been particularly apparent in patients with burns involving 50-90% of the BSA. Little improvement in survival has yet been noted in patients with burns involving more than 90% of the BSA.

We are convinced that general improvements in topical antimicrobials, antibiotics,

TABLE 1

General Patient Data

	1981-1983	1984-1988
Number of patients	342	559
Average age	38	41
Average per cent burn	30.1	26.6
Average third-degree burn	14.2	10.7
Survival	87.6%	91.5%
Length of stay (days)	36	24

Figure 2.

MUSC Burn Survival 1981-1983, 1984-1988

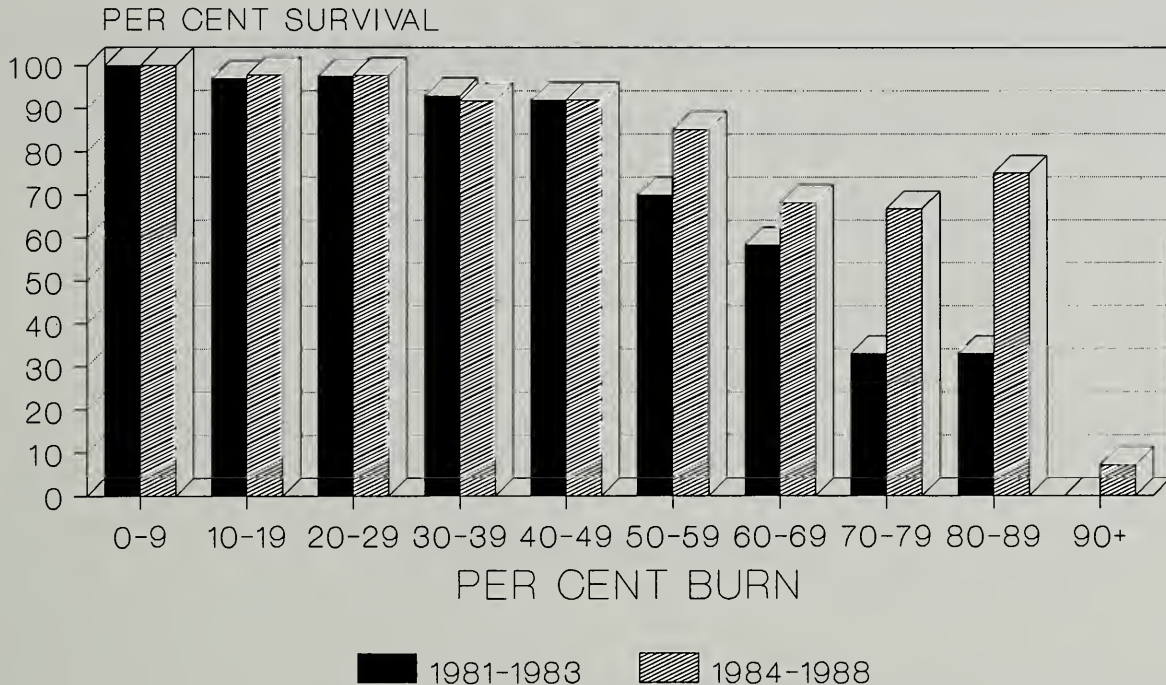


TABLE 2

Patient Data in Burns Involving More Than 50% BSA

	1981-1983	1984-1988
Average age	44	44
Average per cent burn	63	69
Average third-degree burn	36	38.7
Survival	52.3%	63.6%
Length of stay (days)	59	33

techniques of critical care, improved wound care techniques and, very importantly, maintenance of the patient's nutritional status are all critical factors in improving survival in the burned patient. Attributing the increased survival of burned patients to any one of these factors alone currently does not seem to be clearly supported by data reported in the literature nor by our own experience.

It is to be hoped that as the quality of skin substitutes and techniques of culturing skin improve, inroads into the extremely high mortality of burns involving more than 90% of the BSA can be made. The MUSC burn service is currently investigating the place of aggressive early burn wound excision and grafting with cultured epithelial autografts in achieving this goal. □

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HYPOTHYROIDISM AS A CAUSE OF ENZYME ELEVATIONS

RAY B. VAUGHTERS, JR., M.D.*

The widespread use of screening laboratory tests as adjuncts to the routine physical examination sometimes presents a problem: what should one do when an asymptomatic and apparently healthy person is found to have elevated serum enzyme levels? Presented here are three instances in which such abnormalities provided the clue to previously-unrecognized hypothyroidism. In each instance, the abnormalities corrected to normal after thyroid supplementation.

CASE REPORTS

Case 1. A 55-year-old man whose history was remarkable only for hypertension was found on annual physical examination to have the following abnormalities on a routine SMA-19 panel: alkaline phosphatase 124 mIU/ml (normal 20-115 mIU/ml); LDH (lactic dehydrogenase) 360 mIU/ml (normal 25-235 mIU/ml), and CPK (creatine phosphokinase) 3500 mIU/ml (normal 25-235 mIU/ml). Chest x-ray, electrocardiogram, acid phosphatase, barium enema, intravenous pyelogram, liver biopsy, upper gastrointestinal series, proctoscopy, and muscle biopsy were all within normal limits. Serum T4 (thyroxine) level was 1.8 mg/dl (normal 4-12 mg/dl). He was treated with levothyroxine sodium, 0.05 mg by mouth each morning. Three months later, his T4 level was 10.6 mg/dl and his CPK was normal (114 mIU/ml).

Case 2. A 40-year-old woman was evaluated for the complaint of myalgia. Physical examination was within normal limits. An SMA-19 panel revealed CPK 1089 mIU/ml; LDH 344 mIU/ml; and SGOT (aspartate aminotransferase) 53 mIU/ml. CPK isoenzymes revealed the elevation to be predominantly of CPK-2 (striated muscle). Chest x-ray, upper GI series, gallbladder series, and liver scan were all within normal limits. Her serum T4 was 2.4

mg/dl. She was treated with thyroglobulin (1 grain each morning). Four months later, laboratory values including CPK, LDH, and SGOT were all within normal limits. Her myalgia had resolved completely, and her T4 level had returned to normal.

Case 3. A 57-year-old woman, whose past history was remarkable only for total abdominal hysterectomy in 1973 for in situ carcinoma of the cervix, had no abnormalities on routine physical and pelvic examinations. However, an SMA-19 panel revealed a CPK of 1123 mIU/ml, LDH 381 mIU/ml, and SGOT 90 mIU/ml. Chest x-ray, liver-spleen scan, and barium enema were within normal limits. Her T4 level was 2.7 mg/dl. She was begun on levothyroxine (0.05 mg each morning). Six months later, laboratory studies including T4, CPK, LDH, and SGOT were all within normal limits.

DISCUSSION

The correlation of hypothyroidism and elevation of the CPK, SGOT, and LDH is recognized by several authors.¹⁻³ The source and etiology of these changes, however, are disputed. DeSilva⁴ and Klein⁵ feel the elevation to be from skeletal muscle, while Tajiri believes the elevation to be of hepatic origin.² Others suggest that both muscle and hepatic sources contribute. Strausberg⁶ feels that the cause of the changes is decreased clearance of normally-produced enzymes due to hypothyroidism. Tajiri attributes the rise to a decrease in hepatic circulation caused by hypothyroidism.² Still others attribute the enzyme elevations to a fall in body temperature. Irrespective of the cause, there is agreement that the abnormalities should return to normal within two weeks of proper thyroid replacement therapy. If this fails to occur, other causes for the enzyme abnormalities should be sought.

SUMMARY

Three cases are reported in which elevated serum enzyme levels—CPK, SGOT, LDH,

* 39 Varden Drive, P.O. Box 2454, Aiken, S. C. 29802.

and/or alkaline phosphatase—provided an important diagnostic clue to previously-unrecognized hypothyroidism. □

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MEETING ANNOUNCEMENT

South Carolina Chapter
American Academy of Pediatrics
Annual Scientific Session
“Pediatric Update”

Faculty: E. Richard Stiehm, M.D., William Kanto, M.D., Carl A. Johnson, M.D., Mr. Michael Jarrett

Meeting Site: Kiawah Island Inn, Kiawah Island, South Carolina

Meeting Dates: Thursday, August 2-Sunday, August 5, 1990

Credit: AMA Category I and PREP, 6 hours.

For more information contact: Debbie Shealy, SC Chapter AAP, P.O. Box 11188, Columbia, SC 29211, (803) 798-6207.



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JUNE 1990

HIGHLIGHTS OF MAY 24 BOARD OF TRUSTEES MEETING

The Board of Trustees observed a moment of silent prayer in memory of J. Gavin Appleby, MD, who died on May 17. Dr. Appleby was a former president of the SCMA and was currently serving as an alternate delegate to the AMA.

The Board of Trustees considered problems created for physicians by the new Southern Bell Caller ID service. Physicians have expressed concerns that their private, unlisted numbers would be available to patients and others through a special piece of equipment before the call is answered. Southern Bell has advised that there are options available to eliminate your telephone number from being delivered to the person you are calling, as follows:

- The call can be placed through a telephone company operator (you can dial 0+ the 7-digit local number and bill the call to your Southern Bell Calling Card). There is a \$.30 charge for the call.

- The call can be placed from a public telephone, and the public telephone number will be delivered.

- The call can be placed through a third party, and the third party's telephone number will be delivered.

- The caller can subscribe to "RingMaster* Service" whereby they have two numbers with two ringing patterns associated with a single line. The number that will be delivered to the called party can then be made nonpublished and not answered. There is a monthly rate of \$3.95 for this service.

You may wish to check with your answering service to determine if they have the ability to have a call placed through them. The SCMA has been advised that at least three answering services in the Columbia area have the equipment to accommodate this service.

As directed by the House of Delegates at the 1990 Annual Meeting, President John W. Simmons, MD, has formed a Committee on Environmental Preservation and Protection. The 1990-91 chairman will be Edward Catalano, MD.

The Board of Trustees selected Roger Gaddy, MD, of Winnsboro, Robert L. Galphin, MD, of Columbia, and William Carter, MD, of Charleston as nominees for three new positions on the PRO Board.

Through a resolution submitted to the AMA House of Delegates, the board clarified that necessary action should be taken to repeal the limits on balance billing, which will be in effect on January 1, 1991, as a result of OBRA 1989, except for those "procedures which are designated by Congress and are documented by data acceptable to the medical profession to be "overpriced."

The board selected Daniel W. Brake, MD, to fill the vacancy in the position of AMA alternate delegate created by the untimely death of J. Gavin Appleby, MD.

MEDICARE UPDATE

Physician Coverage Arrangements

HCFA has advised that it is reevaluating Medicare policy for physician coverage arrangements in response to widespread concerns within the profession. AMA has urged such a review. HCFA informed the AMA that it has advised its regional office to notify Medicare carriers to continue historical billing and payment practices pending its efforts to resolve issues regarding covering physician arrangements under Medicare. Thus, under the HCFA directive, Medicare carriers, such as SC Blue Cross and Blue Shield, who previously permitted a physician to bill for services provided by a substituting colleague should continue that practice.

Special Medicare Bonus: Health Manpower Shortage Areas

Reminder: In 1990, Medicare reimburses physicians who practice in an HMSA 1 or 2 rural area a special five percent bonus if claims are submitted with the HMSA class on them according to instructions in the Medicare manual.

It is the understanding of the SCMA that in 1991 physicians in all HMSA areas (classes 1-4) will receive a 10 percent bonus if the HMSA class is submitted on Medicare bills.

It is important that the agencies which determine HMSA status have the latest information on changes which reduce the availability of physicians in your area. You are encouraged to notify Richard Demarest of the Health and Human Services Finance Commission of physicians in your area who retire, restrict their hours, move away, etc. You may write Mr. Demarest at PO Box 8206, Columbia, SC 29202, or call 253-6177 in Columbia.

If you have Medicare questions or problems, contact Barbara Whittaker at SCMA headquarters.

UPDATE: PROPOSED REGULATION OF PHYSICIAN OFFICE LABS

On May 21, HCFA published proposed rules which are designed to implement the Clinical Laboratory Improvement Amendments of 1988, in which Congress required HCFA to issue federal standards for all labs which test human specimens. Interested parties have until August 20 to comment on the proposed regulations, which would:

- exempt certain offices from CLIA standards (labs which only perform tests such as dipstick or tablet reagent urine analysis for specified analytes, fecal occult blood, spun microhematocrit, certain microscopic examinations, ovulation tests, whole blood clotting time, urine pregnancy tests, antistreptolysin O screen-slide card agglutination test, C reactive protein screen-slide card agglutination test, rheumatoid factor screen-slide card agglutination test, gram stain on discharges and exudates, infectious mononucleosis screen-slide card agglutination test, potassium hydroxide preparation on cutaneous scrapings, erythrocyte sedimentation rate, sickle cell screening-methods other than electrophoresis, glucose screen whole blood dipstick method-visual color comparison determination, and semen analysis). PHYSICIANS WOULD BE REQUIRED TO APPLY FOR A "CERTIFICATE OF WAIVER" (APPLICATION FEE ESTIMATED BY AM NEWS TO BE APPROXIMATELY \$500 EVERY TWO YEARS).

- require certification as a Level I lab (offices which perform cholesterol screens, cultures for colony counts for urinary tract infection (not to include identification and susceptibility), hemoglobins (methods other than electrophoresis), white blood cell counts, red blood cell counts, hematocrits, urea nitrogens (BUN), creatinines, uric acids, glucose and direct streptococcal antigen tests must be directed by a physician or PhD-level scientist and test analysts must be high school graduates or the equivalent (application fee estimated by AM News to be approximately \$2,000 every two years).

- require certification as a Level II lab (offices which perform all tests not covered by above categories) must be directed by a pathologist or PhD-level scientist. All Level II tests must be performed by qualified lab technologists or technicians (no estimated fee available at this time).

For a copy of the proposed regulations and a sample letter to Congress and HCFA, please call Kim Fox or Joy Drennen at SCMA headquarters. You are encouraged to read these regulations to ascertain how these requirements would affect your office if finalized. You also are encouraged to submit comments to HCFA; please send a copy to Barbara Whittaker at the SCMA. The SCMA plans to write Congress and HCFA.

PRACTICE MANAGEMENT UPDATE

For your information, the CPT book includes a code "99080" which is defined as the code for "special reports such as insurance forms, or the review of medical data to clarify a patient's status - more than the information conveyed in the usual medical communications or standard reporting form."

Direct billing questions to Barbara Whittaker at SCMA headquarters. Please remember to keep the Insurance Commissioner and SCMA informed of problems you encounter with utilization review.

CDC GUIDELINES FOR INFECTION CONTROL

Potential exposure to HIV and other bloodborne pathogens is a risk every physician faces. The AMA wants to make sure that infection control guidelines are as comprehensive as possible. After reviewing all the proposed standards for protecting health workers from exposure, the AMA concluded that the Centers for Disease Control's guidelines present the best methods of preventing occupational transmission.

The AMA recently testified to that effect before OSHA. In addition, the AMA urged OSHA to train enough field staff to conduct infection control inspections without disrupting the delivery of quality care.

For a copy of the CDC guidelines, contact Kim Fox or Joy Drennen at SCMA headquarters.

SCMA/AMA MEMBERSHIP RECRUITMENT CONTESTS

Join the 1990 contest to recruit new members and compete for a \$2,000 gift certificate for a trip for two (first prize) or a pen and pencil set (second prizes). Physicians signing up SCMA members will be awarded one point for each member, and physicians signing up AMA members will be awarded one point for each member. Three points will be awarded when a physician is recruited for both SCMA and AMA membership. Recruiters will also have points counted toward a county prize which will be a \$2,000 gift certificate for a trip for two to be given to the county medical society. The contest runs from June 15 to August 31, 1990. All new membership applications must be in the SCMA office by September 10.

Contact Julia Brennan at SCMA headquarters to sign up for the contest.

WANTED: PHYSICIANS TO TREAT WORKERS' COMPENSATION CASES

Marion McFarland, III, MD, chairman of the SCMA Occupational Medicine Committee, recently met with the executive director and commissioners of the SC Workers' Compensation Commission. The

commissioners were concerned that many SC physicians were refusing to take workers' compensation cases.

In an effort to have increasing communications between the SC Workers' Compensation Commission and the physicians in the state, Dr. McFarland would like to encourage physicians to treat workers' compensation cases. If you are interested in treating such cases, please contact Julia Brennan at the SCMA.

AMA'S HEADQUARTERS MOVE

The staff of the AMA will be moving into leased space in a new headquarters building in Chicago, beginning August 16. Effective August 27, the AMA's mailing address changes to 515 North State Street, Chicago 60610. The general office phone number becomes 312-464-5000.

PUBLICATIONS AVAILABLE

Teach your staff claims processing the easy way with the AMA's introductory audiocassette and workbook, Insurance Processing. This user-friendly self-study course includes examples of the set-up and operation of efficient processing systems, along with study exercises and resources listings. AMA members pay only \$34.95. Call 1-800-621-8335 to order.

The SC Department of Mental Retardation has a new packet of publications available to medical professionals. The free packet contains information about the mental retardation service delivery system, services provided by DMR and support groups for families of people with mental retardation and related disabilities. To receive the packet, write to the Community Education Office, SC Department of Mental Retardation, PO Box 4706, Columbia, SC 29240 or call 737-6477 in Columbia.

CAPSULES

Joseph D. Thomas, Sr., MD, of Denmark, has been named the 1990 Family Physician of the Year by the SC Academy of Family Physicians.

Keith Torgersen, who works in the critical care unit of McLeod Regional Medical Center in Florence, has been named the 1990 Registered Nurse of the Year by the SC Hospital Association.

Kathy Hornsby of Richland Memorial Hospital was named Licensed Practical Nurse of the Year.

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A HISTORY OF THE WILLIAM S. HALL PSYCHIATRIC INSTITUTE

ALEXANDER G. DONALD, M.D.*

In 1961, Mr. C. M. Tucker, Jr., Chairman, South Carolina Mental Health Commission, and Dr. William S. Hall, South Carolina Commissioner of Mental Health, went to see then Governor Fritz Hollings about the difficulty in recruiting psychiatrists. The Governor made available to them some of his discretionary funds to start a training program at the South Carolina State Hospital. The program started with one faculty member (Dr. Ed Burn). The residents were assigned inpatients in rotation with staff with little in the way of a formal educational program. In 1965 the residency was put on probation by the Council On Medical Education and all except one of the residents left the program. The five major deficiencies were: (1) overloading the residents with service functions; (2) lack of individual supervision; (3) lack of an organized experience in child psychiatry; (4) lack of a definitive experience in the care and management of outpatients and (5) insufficient experience with the less seriously ill patients. At that point, Mr. Tucker and Dr. Hall went back to Governor Hollings, who had heard of the establishment of psychiatric institutes in other parts of the country and suggested that one be established in South Carolina.

The value of historical study in seeking clues for the future is pointed out by Lawrence C. Kolb in his article, "The Institutes of Psychiatry, Growth, Development and Future." As the result of a charge to Ira Van Gieson from the Commissioners of Lunacy of New York, the Pathologic Institute of the State of New York opened in 1896, the first medical research institute in the United States. It was multidisciplinary (bacteriology, pathology, physiology, biochemistry, anthropology, psychology and psychiatry). It was a separate laboratory and not a part of a hospital or a university. After several years it was lagging due to a lack

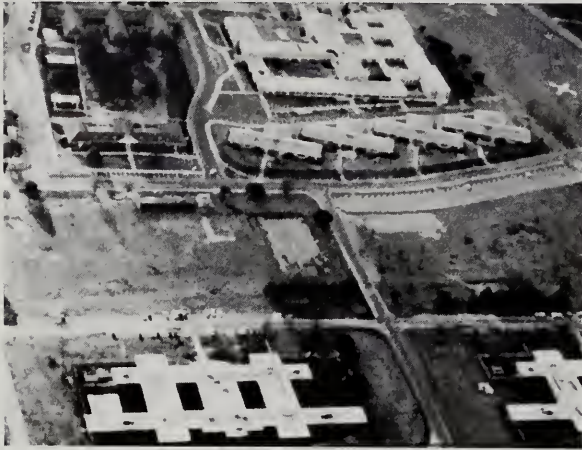
of support. Dr. Adolf Meyer took over as Director, moved it to a state hospital and changed the name to The New York State Psychiatric Institute. In 1928, it was moved to the Columbia-Presbyterian Medical Center and has flourished since that time in a university medical center with the primary functions of research and postgraduate teaching, while furnishing special services for a limited number of patients. History indicates that in order for a research institute to flourish, there must be an interdisciplinary interchange, with mutual respect—a pursuit of knowledge in an ambience of intellectual freedom, flexibility, tolerance, humility and generativity. There is a need for multiple sources of support. This is necessary to lessen the impact should any of the work being done challenge the social values of the day or the personal opinions of individual political powers, thus decreasing the pressure toward conformity from centralized bureaucratic management.

After much study and many visits to operating programs, it was decided that the recently completed admission unit building for the South Carolina State Hospital would be established as a teaching and research institute. This building had been constructed at the cost of 3.7 million, two-thirds of which was Federal funding under the Hill-Burton Program. With the Governor's help, a law was passed establishing the William S. Hall Psychiatric Institute as a teaching hospital for the primary purposes of training mental health professionals and conducting psychiatric research.

The unique provisions for this hospital as recorded in South Carolina statutes are:

1. Admissions to the Institute shall be based upon the need of the Institute and shall be controlled by the superintendent.
2. Informal admissions (like that of a general hospital) shall be available.
3. In addition to the mentally ill, persons suffering from neurological disorders will be eligible for admission.

* William S. Hall Psychiatric Institute, P. O. Box 202, Columbia, S. C. 29202.



William S. Hall Psychiatric Institute.

The Institute had a separate budget, a separate staff and a separate accreditation. Emphasis was placed on the development of outpatient and child psychiatry services. The number of patients assigned to each resident was limited, and admissions were strictly controlled so that each resident had experience with the total spectrum of mental illness. A well qualified staff was recruited. Since it is necessary that residents learn to distinguish physical from psychological illnesses, a neurologic section with outpatient and inpatient services was developed. This is complemented today by an electroencephalographic laboratory and a sleep laboratory. This section does not treat acute neurological problems but does treat chronic, degenerating ones such as Huntington's chorea, Alzheimer's disease, various forms of epilepsy, and Wilson's disease which are frequently difficult to distinguish from psychological illnesses.

Supporting services for the Institute include an audiovisual section with a closed circuit television system, a professional library, and *The Psychiatric Forum*, a journal devoted to the publication of articles on subjects pertinent to mental health. Many years ago, the Ensor family established a foundation for mental health research which is administered by the Citizens and Southern National Bank. The income from this foundation was used to partially support the Ensor Laboratory at the newly established Institute.

Fully accredited training programs in all mental health professions were developed: A

residency in general psychiatry (four years—the first of which has four months of primary medical training, either internal medicine, pediatrics, or family practice); a fellowship in child psychiatry (two additional years, one of which may overlap with general psychiatry); an internship in clinical psychology (one year); placement for graduate social work students (three months); placement for undergraduate and graduate nursing students (three months); placement for recreational, occupational, music and art therapists (three months); clinical pastoral training (one year); clinical pastoral supervisory training (one additional year) and continuing medical education. These programs involved early educational contacts and relationships with The University of South Carolina (nursing students and social work placement), state associate degree nursing programs, and colleges outside the state. All of these mental health specialists have specific expertise which is most helpful to mental patients when appropriately used. But, obviously, to expect the same thing of an individual with three months' clinical internship during a two-year masters degree program that is expected of an individual who has completed medical school, a four-year residency program and possibly a two-year fellowship is inappropriate. It has been Institute philosophy that people who train together come to understand what each discipline does best and, therefore, work together more effectively for the benefit of the patients they serve.

In fulfilling its mission as a teaching center, the Institute developed a pilot project for the village system which the department was developing. This program related each inpatient unit with a mental health center in order to maximize continuity of care. The Institute inpatient unit related to the Santee Wateree Mental Health Center in Sumter. It was such a successful arrangement that it was retained even after the overall village system was developed and transferred to Bryan Hospital. It is an integral part of the Institute residency training program in community psychiatry.

A second example of an Institute pilot project was the development of an intensive treatment program for patients who had been in the State Hospital for more than seven years. The length of hospitalization required was later re-

duced to four years. This was so successful that it was adopted department-wide as a community support program and has played a significant part in the reduction of the population of the State Hospital.

Another project, which was initially funded by a federal grant, is the Alzheimer's Day Care Program. With an increasing number of patients with this disease, a comprehensive system of care must be developed. This program cares for patients during the day so that the family may go about their work or have respite from the patient's care. It has been well received and featured in several prominent newspaper articles. It is a program that has turned out to be worthy of duplication in each metropolitan area in the state. The results have clearly shown that it prolongs home care and the intact family, prevents early institutionalization, gives better patient care, improves family acceptance and saves money.

An eleemosynary foundation (the Health Resources Foundation) was established in 1972 "to promote the educational and research programs of the William S. Hall Psychiatric Institute and to support such other activities in the mental health field in South Carolina as the trustees may from time to time determine." A professional practice plan was developed in order that the academic staff might supplement their salaries with limited private practice. The Shearouse Pavilion, a 20-bed facility for treatment of adults experiencing acute psychiatric problems, was established as a self-supporting unit for the private practice of faculty members of the Department of Neuropsychiatry and Behavioral Science.

Following the Institute director's sabbatical in Glasgow in 1982, each Spring one Institute resident has spent three months in Scotland and one of Glasgow's "registrars" has spent three months in Columbia. This is a significant addition to both programs. The experience of dealing with psychiatric patients and staff in a different culture forces one to rethink and to clarify basic concepts.

A unique aspect of the Institute's history has been an annual visit by Dr. Kenneth Artiss, a psychiatrist from Bethesda, Maryland. Over the years, Dr. Artiss has made a series of presentations to psychiatry residents; these have been compiled in a book which will be pub-

lished soon. Dr. Artiss annually evaluates the Institute's progress and plans—giving a critique with constructive criticism and advice. It is an advantage that he has known the Institute from its inception yet has not been involved in its day-to-day operations.

In 1967, convinced of the importance of including in the training programs the dynamic concepts best defined in psychoanalysis, arrangements were made for three psychoanalysts from New York to visit the Institute on a regular basis. (There was no analyst available in South Carolina at that time and attempts to recruit one had been unsuccessful.) After several years one of the original three decided to move here and another psychoanalyst joined the staff as the Director of the General Psychiatric Residency Program. They started a psychoanalytic study group with members drawn from Augusta, Charleston and Savannah. In an attempt to integrate an analytic approach into the residency program here, they held a weekly clinically-oriented session on supervision with the faculty. A resident who was supervised by the author did a videotape of each session with a patient, and the tapes were then reviewed by the faculty. This supervisor shared his impressions from supervision and an analyst critiqued the process weekly, for a year. Another staff member videotaped each supervisory session with a resident, and these were critiqued by an analyst weekly for another year. A weekly case conference for residents followed the treatment of a patient who was being treated by one of them. Recently another analyst joined the faculty of the University of South Carolina School of Medicine and was given an office in the medical school library building so that he is available to medical students for counseling as needed, without referral and/or reporting to faculty or administration. Together, these analysts have developed an analytic training program as a satellite to the Duke/University of North Carolina program and currently have four psychiatrists in psychoanalytic training.

Psychoanalysis has contributed to the art of psychiatric treatment by: (1) an analytic approach to mental problems based on the premise that human behavior can be understood; (2) a working conceptualization of the mind; (3) help for those who work with patients in understanding themselves in order that they might

treat patients more efficiently and effectively; (4) contributions to the education and training of psychiatrists; and (5) emphasizing the importance of a reliable and understanding relationship (person to person) in psychiatric practice.

Further professional growth is also reflected inasmuch as about a year ago there were 114 members of the Mid-state chapter of the South Carolina Psychiatric Association: 23 were members in training at the Institute, 91 were full members. Of the 91, 39 did their residencies at the Institute and 21 were originally recruited to the area as faculty of the Institute. Thus, 60 of the 91 were attracted to the area by the Institute. Of 17 graduates of the Institute residency program between 1985 and 1988, 15 (or 88%) have initially chosen careers in the public sector of psychiatry, 12 (or 70%) with the Department of Mental Health, 11 (or 64%) have continued in the public sector.

When the University of South Carolina was developing a medical school, it was felt that the best interests of the University and the Department of Mental Health would be served if the Institute became the Department of Psychiatry at the School. This would be most economical, and there was no need for duplication. An agreement was signed which stated that the Director of the Hall Institute and the Chairman of the Department of Psychiatry would be one and the same. The grant for the medical school had no position for a neurologist and the Institute had four board certified neurologists; therefore, it was decided that this department would be the Department of Neuropsychiatry. This is relatively unique: most neurologists are in the departments of Internal Medicine or, at large medical schools, there is a separate Department of Neurology. The medical school grant had only one position for teaching behavioral science. That seemed impractical considering the necessary absences for annual leave, sick leave, etc. The Institute had many behavioral scientists; therefore, the final evolution was the Department of Neuropsychiatry and Behavioral Science.

The combination worked well. The academic halo helped to recruit well-qualified faculty. The Department has time allotted for teaching in each of the four years of the medical school; 72 hours in the first year for a course in human

behavior; 72 hours in the second year for a course in psychopathology, eight weeks for a clerkship in clinical psychiatry during the third year and four weeks for a clerkship in neurology during the fourth year. Students do their clinical rotations at the Institute, the Bryan Dorn Veterans' Center, The Baptist Medical Center and Charter Rivers Psychiatric Hospital.

Students at this school have consistently performed above the national norm on exams in behavioral science and psychiatry. Since 60 percent of psychiatrically ill patients are treated by primary care physicians, the more students going into primary care know about the mentally ill, the more the mentally ill of South Carolina will benefit. Last year, nine of 57 graduating students (or 15.8%) went into psychiatry, eight applied for residencies at the Institute, four were accepted because of limited positions and budget, and the other four went elsewhere but hopefully will return to South Carolina. The national average of students going into psychiatry is four percent.

The University halo has also helped research to flourish. An outstanding child psychiatry researcher was recruited and is on the staff of the Institute. Her grants, however, are acquired and administered through the University. She currently has two major grants, one to study the epidemiology of depression in childhood and the other to study the effect of lithium in therapeutic doses on adolescents who are beginning to abuse drugs. Another child psychiatrist at the Medical School and a geneticist at the Institute have a major grant to study autism and have recently completed an educational program funded by the Fullerton Foundation on psychotropic medications for children. The summer medical student clerkship funded by NIMH, the Department of Neuropsychiatry, and the Institute, has fostered both faculty research and student interest in psychiatry. The grant funds for this year are \$692,803 with a projection of \$1,555,708 approved for future years; for a total of \$2,248,511.

This past November it was the Institute's privilege to host a three-day, national, multidisciplinary symposium on Freud's impact on twentieth century thought. This was held in recognition of the 50th anniversary of Freud's death. The unsolicited letters that have been received from those who attended are im-

pressive, and the program was given full page coverage in "The Week in Review" of *The New York Times*. A traveling exhibit of archeological items from Freud's consultation room was on display at the University Museum. There are only 10 academic centers around the country which mounted this exhibit.

Dr. Fuller Torrey wrote in his evaluation of the Department of Mental Health several years ago that South Carolina was unique in that it had heaven on one side of the street and hell on the other, referring to his appraisal of the Hall Institute and the South Carolina State Hospital, respectively. The Commissioner of Mental Health asked for a plan from the Institute to correct this situation. The plan that he accepted involved an increased service load for the Institute (with the most difficult psychiatric patients—forensic and adolescent) but, with increased funds and positions for education and research to maintain the Institute's *raison d'être*. The latter have never materialized due to budget problems whereas the service load has progressively increased to the detriment of research, staff recruitment/retention and to a lesser degree—so far—education.

Since that time, some success has been realized in the recruitment of qualified forensic psychiatrists. The number of forensic inpatients has been reduced by decreasing the time required to do an evaluation and by doing many evaluations on an outpatient basis. Also, the Institute developed a forensic fellowship program which is one of 10 approved programs in the country. The expertise of the forensic faculty is shared with other state agencies, filling a long-standing need.

The child and adolescent program has been more problematic in that recruiting has been less successful and the number of patients hospitalized for evaluation and treatment has progressively increased.

More recently, when the medical school purchased the Clinical Education Building, Neuropsychiatry was assigned space which has been appropriately developed. There has always been a problem of identity. First the Institute was thought of as a part of the State Hospital, later it has been thought of by the Department of Mental Health as part of the University. This new physical separation hopefully will go a long way toward clarifying the identity of each. It



Bronze plaque in honor of Dr. William S. Hall upon his retirement.

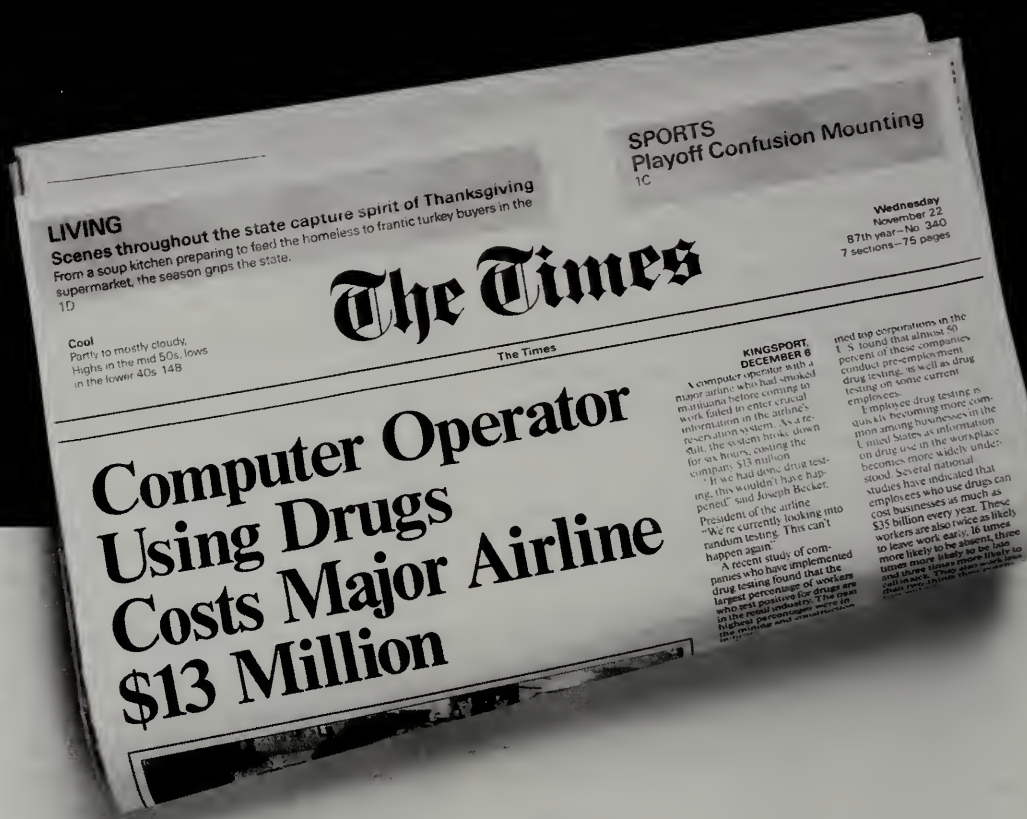
also positions each so that each can survive if a separation is mandated at some point.

The Institute has evolved into a nationally recognized teaching and research hospital. It is a model of the advantages of academic linkage both for departments of mental health and schools of medicine. Its educational programs are truly eclectic—from basic biologic research to psychoanalytic training. It has consistently fulfilled its mission of educating mental health professionals, with by far the majority of its graduates going into public service in South Carolina and its mission of psychiatric research into mental health problems pertinent to South Carolinians, with increasing Federal funding. The Institute has developed special treatment programs which have been adopted throughout the state, and it stands ready to meet new challenges to benefit the mentally ill citizens of South Carolina. □

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Editorials

The following guest editorial pertains to the important article by Stewart and colleagues in this issue on interventional treatment of ventricular arrhythmias. Guest editorials reflect the opinions of the authors, and not necessarily those of the Editorial Board or of the SCMA leadership.

—CSB

ELECTROPHYSIOLOGY COMES OF AGE NEW THERAPIES FOR VENTRICULAR FIBRILLATION

Electrophysiologic evaluation of the heart began in the late 1960's with Dr. Damato's recording of a His bundle depolarization in man. Over the next decade, many investigators expanded this specialty to evaluate the mechanism of bradyarrhythmias and tachyarrhythmias. Ventricular tachycardia and fibrillation were found to arise from a microreentrant focus. Frequently this focus could be suppressed with appropriate drug therapy identified by serial electrophysiologic drug testing. "In lab" suppression correlates highly with clinical control. The focus could also be localized and surgically excised or ablated. Electrophysiologic evaluation of the heart thus assisted physicians with one of the most difficult medical management problems—sudden cardiac death. Unfortunately, the next decade, while further advancing our understanding of ventricular tachyarrhythmias, also defined the limitations of electrophysiologic testing. Many patients could not be appropriately studied due to lack of reliable inducibility of the ventricular arrhythmias in the electrophysiology lab. Many could not be controlled with available drug therapy. Risk for sudden cardiac death, therefore, continued to plague the electrophysiologist.

As the NASA space technology became available to the pacing industry, ventricular tachycardia terminating pacemakers were developed. Unfortunately, it became rapidly apparent that instead of tachycardia termination, sometimes these devices could accelerate the

tachycardia to a potentially lethal arrhythmia. Tachycardia terminating devices for ventricular arrhythmias have not, therefore, been released from clinical trials—and appropriately so.

At the same time that Dr. Damato was recording the His bundle, Dr. Mirowski was mourning the death of his mentor at Johns Hopkins—having died of ventricular tachycardia. He spent the next 20 years of his medical career developing an "implantable defibrillator." Many technical problems arose, but once again, with the release of the NASA space technology, the device was finally developed. The device is not without its limitations as noted by Dr. Leman's group. Ideally, ventricular tachycardia should be terminated by a tachycardia terminating pacemaker with cardiac defibrillation capability in case the dysrhythmia accelerates.

Since this is not available in a single implantable device (yet!), Dr. Leman's group improvised with two devices implanted simultaneously. This allows termination of the potentially lethal arrhythmia without the discomfort of a defibrillation shock, yet maintains the back-up protection needed should the arrhythmia accelerate. We applaud the ingenuity of Dr. Leman's group.

As we embark on the last decade of the 20th century, the medical community has reached the threshold of reliable protection from sudden cardiac death. Identification of patients at risk can be achieved with Holter monitoring,

high resolution electrocardiographic identification of ventricular late potentials, and electrophysiologic testing. Protection can be achieved with use of drug therapy, accurately identified by electrophysiologic testing; with tachycardia terminating devices; and/or implantable defibrillators. We have a long way to

go, but we have also come a long way. No matter how you view it, electrophysiology is truly coming of age.

W. LAWRENCE SCHOOLMEESTER, M.D.
Director, Cardiac Electrophysiology Lab
Providence Heart Institute
Columbia, South Carolina 29204

PASS THE WORD!

First the rumors: “He’s still in the Atlanta airport!” Then the whispers: “He’s in the hotel!” Finally, the introduction. Dr. John Simmons, our new president, presented his friend, Dr. Ferrol Sams, to speak at the inaugural banquet at the 142nd annual meeting of the South Carolina Medical Association.

One point registered quite clearly: John Simmons had decided that the occasion should be *fun!* Sober remarks about the state of medicine could wait—Dr. Sams had come to entertain us. He did.

John Simmons’ introduction of Ferrol Sams seemed to set the tone of the 142nd annual meeting of the South Carolina Medical Association. The meeting should be serious, with a high sense of purpose—and indeed it was. But the meeting should also be fun! *Pass the word!*

There were poignant moments, such as Dr. John Hawk’s retiring from the AMA House of Delegates and Dr. Euta Colvin’s retiring from the SCIMER board. There were moments of which our association should be quite proud, such as a strong endorsement of the concept of providing care to all of our state’s Medicaid recipients. There were high-quality continuing medical education sessions, which were well-attended. There was something for everybody—which is exactly as it should be.

We were honored by the presence of distinguished guests. There was, of course, Dr. Sams—the noted author of such works as *Run with the Horsemen* and *The Whisper of the River*. Dr. J. Roy Rowland, Jr. of Georgia, one of only two physicians now serving in the Congress of the United States, made inspirational remarks at the SOCPAC luncheon. Nick Theodore, our Lieutenant Governor, addressed

the House of Delegates. And we were given a comprehensive overview of issues facing organized medicine today by the president of the AMA, Dr. Alan R. Nelson.

Dr. Nelson began his remarks with reflections about the extent to which our society is media-driven. To a large extent, he suggested, the media create the demands for our services; then, they blame us for the costs. He drew parallels with the health care systems in other countries. In Great Britain, conservatives want to privatize services while liberals want to nationalize them, and both do so in the name of saving money. He drew attention to what he called “the hassle factor,” which includes the problem of our reputations and standings in the community being held hostage by the courts.

Dr. Nelson ended with a series of long term goals, or desiderata: (1) authority to match our responsibility; (2) fairness in reimbursement; (3) full due process; (4) freedom from conflicts of interest; (5) relief from destruction by the courts; and (6) a balance between the art of medicine and the science of medicine. The art of medicine, he reiterated, has at least five identifiable components. These are: humanism, altruism, ethics, diligence, and a special ability to individualize and regard our services as unique.

John Simmons’ inaugural address left everyone feeling, as the Speaker of the House put it, that “we’re in good hands.” He began with this premise: “We have to accept the fact that this decade will produce a fundamental change in the appearance and function of our healthcare system.” Pointing out that the Medicare budget seems likely to exceed the combined bud-

gets of Social Security and Defense by the year 2000, he called for accountability: "we are all stakeholders in the cost part of the equation." We must acknowledge the reality of change, Dr. Simmons urged, if we are to remain at the discussion table.

I suspect that most of the more than 500 attendees at this year's annual meeting would say, "Yes, I'd go back again." Reflecting the

growing strength and diversity of our organization, the annual meeting seems to be getting better each year. And it is a relevant meeting. Dr. Gerald Harmon made this clear in the report from his reference committee: "Participation in organized medicine is the only way to maintain the practice of medicine as we now know it."

Pass the word!

—CSB

Letters to the Editor

ELECTROCONVULSIVE THERAPY IN SOUTH CAROLINA

To the Editor:

Electroconvulsive therapy (ECT) is widely acknowledged to be a very effective treatment for serious depression. Because of recent advances in technique, ECT is again entering the mainstream of psychiatric practice. With the use of up-to-date procedures, its safety and side-effect profile have been markedly improved.

The American Psychiatric Association recently commissioned a task force to write a practical manual on ECT for psychiatrists. This has resulted in the publication of a 200 page report which provides guidelines for all aspects of the use of ECT.

As part of an effort to gather information about the current practice of ECT in South Carolina, we (representing the ECT committee of the South Carolina Psychiatric Association) surveyed 208 psychiatrists throughout the state. The survey asked questions about the number of physicians who perform ECT, the number of physicians who refer patients for ECT, preliminary data regarding the frequency of the use of ECT, and general attitudes toward the practice of ECT.

Fifty-eight percent of those physicians surveyed responded. Thirty-one physicians (26%) reported that they have treated patients with ECT in the past year, averaging 11 patients per year. There was, however, a wide variability in the number of patients treated, ranging from

one to 50 patients per year. Sixty-nine physicians (53%) reported that they refer patients to other physicians for ECT, averaging three referrals per year.

The fact that physicians are utilizing ECT as a treatment modality in South Carolina may reflect a generally positive attitude toward the use of ECT for a select patient population. However, it is noteworthy that these descriptive data were calculated by the responses of a relatively small sample of the population surveyed. It is likely that a larger sample size would produce more reliable data concerning the practice of ECT in the state.

These findings should serve to generate further investigation into how ECT is practiced in our state, including electrode placement, machine preferences, anesthesia, and types of patients treated. These issues will be studied in a subsequent survey.

CHARLES H. KELLER, M.D.
HILARY J. BERNSTEIN, L.M.S.W.
CAROL M. BURNS, R.N., C.
RUSSELL R. MONROE, JR., M.D.
Department of Psychiatry and
Behavioral Sciences
Medical University of
South Carolina
171 Ashley Avenue
Charleston, S. C. 29425

MORE ABOUT CIRCUMCISION

To the Editor:

The article on circumcision by Elhassani in the February issue of *The Journal* (86: 107-109, 1990) was interesting and well-illustrated.

Rummaging through my texts on neuropathology on another matter, I found the following statement by Courville: "The physiologic effects of an impaired blood supply to the brain have long been recognized. To lessen the pain of circumcision the ancient Assyrians produced syncope in their young men by pressure on the carotids."¹

Is it not the custom for the presiding Rabbi in the circumcision rite on Jewish male infants to give the baby a cloth wick soaked in wine to suck to deaden the pain of the removal of the foreskin?

JOHN P. GALLAGHER, M.D.
1544 Burningtrees Road
Charleston, S. C. 29412

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Editor's note:

All aspects of the circumcision procedure seem to have been subjected to various modifications over the years. In his definitive review of biblical and talmudic medicine, Julius Preuss notes: "A mixture of wine and oil was . . . used in those days, but we do not know whether for compresses or for some other purpose." In another variation, the *mohel* (person who performed the circumcision) would take a sip of red wine, suck the wound, and then spit the wine out.¹

—CSB

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¹ FDA survey, "Patient Receipt of Rx Drug Information", 1983

² A Study of Attitudes, Concerns, and Information Needs for Rx Drugs and Related Illnesses, CBS Television Network Consumer Model Survey, 1983

On the Cover:

THE JOURNAL: JUNE 21, 1905

On June 21, 1905, *The Journal of the South Carolina Medical Association* was born. The Editor, Dr. Robert Wilson, Jr., had the following editorial comment:

The publication of a medical journal in South Carolina is no longer a dream in the minds of a few—it has become a reality before the eyes of all. The need of a journal has long been felt, and five years ago Dr. W. P. Porcher, in his presidential address, suggested that we make an effort to this end. But it was not then considered practicable. Convinced that a journal would be of the greatest value in strengthening and maintaining our new organization, the House of Delegates, at the last meeting of the State Association, determined to venture upon such a publication and entrusted its management to the present Board of Editors. *The Journal* is owned and published by the State Association, to whose members it will be issued free. Every member of the Association, therefore, has the interest of proprietorship and should regard it as a duty to work for its success. *The Journal* [should be] not only representative of what is best in medicine, but a means through which individuals and societies may keep in touch. . . .

Two important health concerns of 1905 were discussed in this first journal: Small Pox and the good news of the passage of the compulsory vaccination law, and Tuberculosis which in 1903 accounted for 14.8% of all deaths in Charleston. (State statistics were unavailable.) The projection for the state, using the same proportions, was that 190,000 South Carolinians alive in 1905 would die of TB.

Dr. Wilson, as the outgoing President of the Association, ended his President's Address with these words:

And now, my friends and fellow-workers, one word in conclusion. The burden

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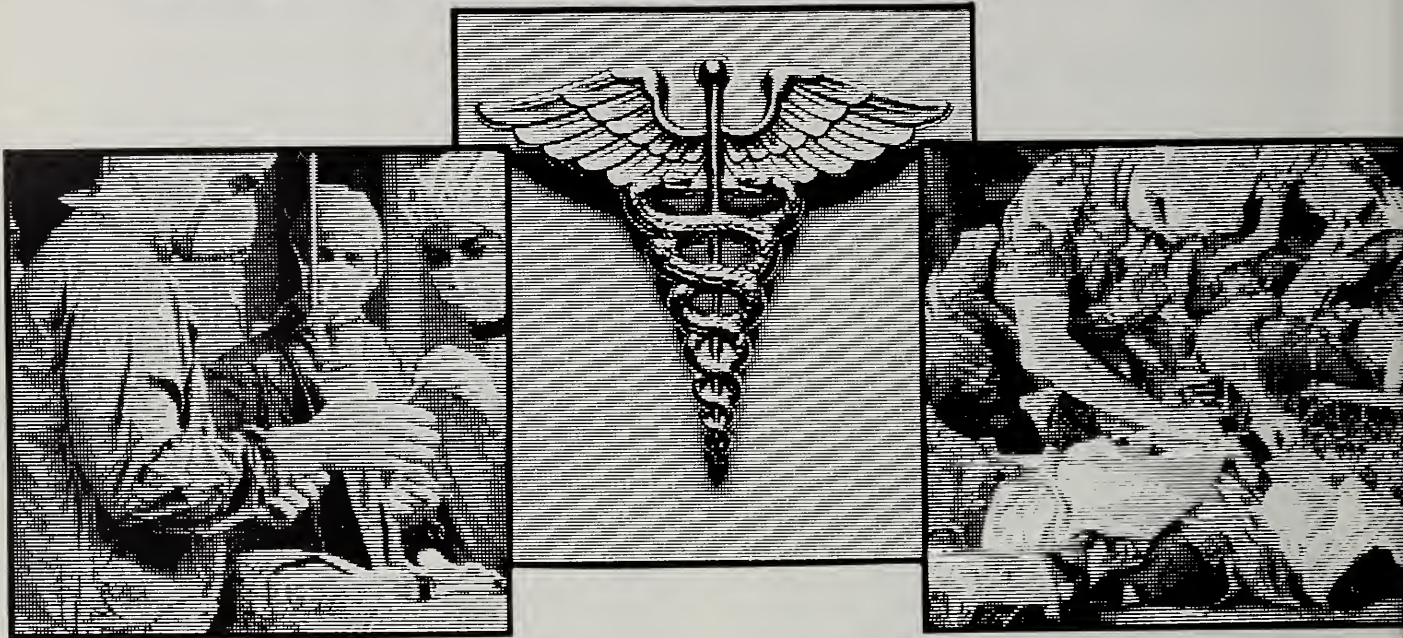
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An early advertisement from the *Journal*

of my message to-day has been that the justification of our new organization will be its usefulness—usefulness to ourselves and usefulness to others—that in order to make this aim a reality and not an empty dream, we must stand shoulder to shoulder and work. I have attempted to point out a few of the fields wherein our labors are most urgently needed, and to show how they may be made fruitful. If any of my suggestions should appear at first Utopian, consider well before you pass a final judgment, and you will later come to feel with me that if an end be just, it only needs for its attainment that we join ourselves together.

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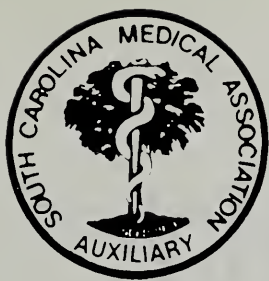
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Auxiliary Page

BUILDING SELF-ESTEEM

“How wondrous if we could accept the fact that we are our perfect self. Who is a more perfect you than you? And you are the only perfect you who will pass this way in the history of the world.” Easy for Leo Buscaglia to say!

In the process of teaching a course on how to raise children’s self-esteem, I realized that many adults feel constrained by their own lack of healthy self concept. At a recent auxiliary meeting, I shared some of the strategies I’ve found most effective in raising my own self-esteem, culled from decades of serious researching and experimenting.

Start by taking the Myers-Briggs Personality Inventory. A trained professional will administer it. Otherwise, you can buy the paperback book *Please Understand Me* by Keirsey and Bates and have the fun of taking it on your own. The results will intrigue and enlighten you. You will understand yourself better and appreciate yourself more. The MBTI told me I’m an introvert. That explained some of the feelings and behavior that I’d never understood before and gave me the permission I needed to be reclusive now and then.

Try keeping a journal. My journal gives me perspective and reminds me that I’ve coped successfully in previous hard times. Written words nail down vague brooding thoughts, keep them from vaporizing and tainting other things and allow me to inspect them closely for what they are. Then I’m free to leave them and move on with my life.

Change any tapes in your head that fail to nurture you. If there are negative tapes telling you that you are clumsy, dumb or unattractive, tape over them with messages that nurture. Ask, “What kind of parent am I to myself?”

Celebrate Yourself, by Dorothy Briggs, delineates this process as do many other books. I delivered a giant watermelon to friends and centered it proudly on their kitchen counter only to have it splatter on their floor as soon as I turned my back. I rummaged in my head for the tape that plays, “Anybody can make a mistake,” and turned up the volume so it would drown out the tape that plays, “You are an oaf.”

Surround yourself with positive friends, all of whom have unique gifts to share. When I was running for a county board, there was one businessman in particular I felt compelled to enlist and impress. As I stood declaiming in his office, my slip fell down and rested gently around my ankles. Instant and absolute mortification! The tape that plays, “You sabotage yourself,” was drowning out all the other tapes. I minced out of his office and immediately called friends who could be counted on to understand. Each one of them laughed so hard she couldn’t speak—which was exactly what I needed to bring me to the point where I could laugh.

Quoting Dr. Guido Groeger, a German psychotherapist: “. . . there is in man no inborn self-love. Self-love is either acquired or it is non-existent. The one who does not acquire it, or who acquires it insufficiently, either is not able to love others at all or to love them only insufficiently. The same would be true for such a person in his relationship with God.”

“You are not enough” is a very detrimental message for a parent to send to a child. Yet, many parents send that message because they feel inadequate themselves.

Scott Peck tells us, “There is no better, and ultimately no other way to teach your children that they are valuable people than valuing them.”

If you still need a reason to value yourself, value yourself so that you’ll successfully value your children.

FRAN HAWK (Mrs. J. Chris, III)

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ESTABLISHING BRAIN DEATH IN SOUTH CAROLINA: A CLINICIAN'S GUIDE*

MARK S. GEORGE, M.D.**

JOHN A. GROSS, M.D.

EDWARD L. HOGAN, M.D.

JEROME KURENT, M.D.

JOHN PLYLER, M.D.

PHANOR L. PEROT, JR., M.D., PH.D.

INTRODUCTION

Modern medical advances now enable physicians to sustain patients who require cardiopulmonary support for prolonged periods. Often, however, patients receiving cardiopulmonary support have suffered significant brain injuries, raising the issue of possible brain death. The determination of brain death, despite increasingly sophisticated technology, remains a clinical decision. Here we outline a guide for South Carolina physicians in order to help with this complex decision.

The simple days are gone when "death" meant "cessation of all organ systems." Most states, including South Carolina, now define "death" as equalling "brain death." A more precise term than "brain death" is determining death due to an "irreversible cessation of brain function" (ICBF). Here we will use the terms interchangeably.

CLINICAL EVALUATION

Numerous professional committees on brain death (ICBF) have proposed guidelines for determining brain death (ICBF) (See Table 1). All agree that ICBF remains a clinical diagnosis. The key elements in this diagnosis are: (1) the absence of cerebral functions; (2) the absence of brainstem functions including spontaneous respiration for a period of at least six hours; and (3) an irreversible state.¹

CEREBRAL FUNCTION

Cerebral function is judged to be absent when there is a lack of volitional movement and of response to visual, auditory, and cutaneous stimulation.¹ It is important to realize that some movements, particularly spinal reflexes, may persist even with ICBF (brain death).^{2, 3} Ropper described five patients who, four to eight minutes after the ventilator was discontinued, had sudden movements of the arms and shoulders—a "Lazarus" sign.³ Jordan described a patient who, five minutes after respiratory support was terminated and cardiac function ceased, crossed both arms over his chest and began to sit up.² The authors suggest that upper cervical cord motor neurons respond to mechanical and hypoxic stimula-

* From the Departments of Neurology (Drs. George, Gross, Hogan, Kurent, and Plyler), Psychiatry and Behavioral Sciences (Dr. George), and Neurosurgery (Dr. Perot), The Medical University of South Carolina, Charleston.

** Address correspondence to Dr. Plyler at the Department of Neurology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S. C. 29425-2232.

TABLE 1
Summary of Sets of Criteria Used to Determine Brain Death (ICBF)

Harvard Criteria (1968)¹⁷	<ol style="list-style-type: none"> 1. Unresponsive coma for at least 24 hours. 2. Apnea. 3. Absent oculocephalic reflexes. 4. Isoelectric EEG. 5. Absence of drug intoxication or hypothermia. 6. Absent spinal reflexes. 												
Minnesota Criteria (1971)¹⁸	<ol style="list-style-type: none"> 1. Diagnosis of irreparable cerebral lesion. 2. No spontaneous movements or respirations. 3. Absent brainstem reflexes. 4. Condition unchanged for 12 hours. 												
President's Commission (1981)¹⁹	<ol style="list-style-type: none"> 1. Irreversible cessation of all brain function, including the brainstem, for at least six hours. 2. No brainstem reflexes. 3. Failed apnea test. 4. Irreversible cause of coma is known or reversible causes are excluded. 												
Brain Death in Children Task Force (1987)^{14*}	<ol style="list-style-type: none"> 1. Coma exists. No volitional activity. 2. Absent brainstem function. <ol style="list-style-type: none"> a. Midposition dilated pupils. b. Absent oculovestibular and oculocephalic testing. c. Absent bulbar musculature movement. d. Apneic 3. Not hypothermic or hypotensive. 4. Flaccid tone. 5. Age guidelines as follows: <table> <tr> <td>Age</td><td>7 days-2 months</td></tr> <tr> <td></td><td>2 examinations, 2 EEGs 48 hours apart</td></tr> <tr> <td>Age</td><td>2 months-1 year</td></tr> <tr> <td></td><td>2 examinations, 2 EEG's 24 hours apart</td></tr> <tr> <td>Age</td><td>>1 year and irreversible condition</td></tr> <tr> <td></td><td>1 exam, observe for 12 hours, EEG optional</td></tr> </table> 	Age	7 days-2 months		2 examinations, 2 EEGs 48 hours apart	Age	2 months-1 year		2 examinations, 2 EEG's 24 hours apart	Age	>1 year and irreversible condition		1 exam, observe for 12 hours, EEG optional
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* These brain death criteria do not apply to premature infants or within the first seven days of life.

tion and produce these movements. Other spinal reflexes which may be present in a brain dead patient include preserved deep tendon reflexes, extensor plantar responses, priapism, neck flexion, and partial opisthotonus. Because of the possibility that these reflex movements might occur in bona fide brain death, it is advisable that family members not be present immediately after discontinuation of ventilatory support.

BRAINSTEM FUNCTION

Brainstem functions are evaluated by testing pupillary reactions to light, reactions to corneal stimulation, and the oculocephalic, oculovestibular, oropharyngeal and tracheal reflexes. The oculocephalic reflex, or "doll's eyes maneuver," is often misunderstood in the clinical setting. In the brain of an unconscious patient with intact brainstem function, reflex pathways keep the eyes directed toward a single point in space.⁴ Rapid movement of the head is countered by reflex stimulation of mus-

cles which maintain the direction of the eyes in a fixed position in space. These oculocephalic reflexes are altered in patients with brainstem lesions and are absent in a patient with no brainstem function. Thus, when the head of a brain dead patient is rotated, the eyes turn with the head. This is often written as "negative doll's eye test;" however, the term "absent oculocephalic reflexes" is much less confusing. Similarly, the oculo-vestibular test is often confusing for the clinician. Stimulation of the labyrinthine receptors by injection of ice-cold water upon the tympanic membrane in a comatose patient with an intact brainstem will cause convergent deviation of the eyes toward the cold stimulus with rapid saccadic movements away. In brain death, stimulation with ice cold water produces no effect. This is a negative oculo-vestibular test, or negative "cold calorics."¹ Another essential test of brainstem function is to determine if spontaneous respiration is possible. This is done best by an apnea test in which the patient with

TABLE 2
Clinical Bedside Tests to Determine Brain Death (ICBF)

1. *Establish the diagnosis*

- Eliminate as a potential cause:—Paralytic Agents
—Sedative-hypnotic Agents (phenobarbital, benzodiazepines, etc.)
—Toxic and Metabolic Disorders
—Hypothermia
—Hypotension

2. *Evaluate cerebral function*

- A. No response to auditory, visual, and painful stimuli

3. *Evaluate brainstem function*

- A. Corneal, pupillary and gag reflexes absent
B. Oculocephalic reflex absent
(Doll's eye maneuver)
C. Oculovestibular reflex absent
(Negative cold water calorics)
D. Failed apnea Test

No spontaneous respirations unventilated for 10 minutes with a documented arterial $p\text{CO}_2$ of $> 60\text{mm Hg}$

a known $p\text{CO}_2$ is pre-oxygenated with 100% O_2 for 10 minutes, disconnected from the ventilator and observed for 10 minutes while six liters per minute of oxygen is administered via an intratracheal catheter.⁵ Arterial blood gases are then measured to confirm that a PCO_2 value of $> 60\text{mm Hg}$ has been reached, a level at which breathing should take place in a patient with a functioning brainstem. If the patient does not breathe under these conditions, he has failed the apnea test and one can conclude that the respiratory drive function of the brainstem is absent.

In addition to determining by a thorough clinical exam that cerebral and brainstem functions are absent, the clinician must try to accurately determine the cause of the comatose state. If the etiology of the coma remains unknown despite a thorough diagnostic assessment, the physician is obligated to determine that no reversible causes for coma are present. It is important to exclude sedative-hypnotic drugs, paralytic agents, toxic and metabolic disorders, hypothermia and hypotension as causes of the coma.⁶ After determining that brain function has ceased, one must ensure that the condition is *irreversible*. When there is a known irreversible cause of coma, one exam alone is sufficient to declare ICBF or brain death. If the cause is unknown, then we recommend two exams repeated 12 hours apart as a good clinical guideline in adults for declaring irreversibility.

THE ROLE OF THE ELECTROENCEPHALOGRAM

Often for psychological and legal reasons doctors obtain an EEG to confirm the clinical diagnosis of brain death (ICBF).^{7, 8, 9} An EEG must meet criteria for electrocerebral silence to support the diagnosis. There must be no electrical activity of cerebral origin on the EEG which is greater than two microvolts amplitude with the sensitivity set at maximum gain. If the EEG shows electrocerebral silence, this is a valuable confirmatory test for the clinical diagnosis. It is noteworthy, however, that one study has shown that one in five patients with irreversible cessation of brain function has continued EEG activity for up to 72 hours.¹⁰ Thus, in 20% of clinically brain dead patients, the presence of some form of EEG activity will not confirm the clinical diagnosis and will only serve to make matters more complex.^{11, 12} It is important to note that 100% of patients with residual EEG activity following the clinical diagnosis of ICBF have irreversible loss of brain function and progress to further deterioration of all organ systems within several days.^{10, 13}

GUIDELINES FOR CHILDREN

Brain death (ICBF) guidelines for children vary from those for adults because of the greater recovery potential of the young brain.¹⁴ Guidelines for premature infants and infants with damage within the first seven days of life

are still evolving and beyond the scope of this article. For term infants, seven days to two months old, two examinations spaced 48 hours apart with two EEG's are recommended. For children aged two months to one year, the time interval between exams is decreased to 24 hours. For children older than one year, the guidelines are similar to those for adults.^{8, 14}

LEGAL ASPECTS

The determination of ICBF and thus death has potential legal implications. In 1984, South Carolina passed a brain death (ICBF) law (see Table 3).¹⁵ This statute refers to "accepted medical standards" in determining ICBF. Table 1 summarizes the published standards for determining brain death as proposed by several expert national professional committees. There is considerable variation in the recommendations of these committees, and the use of an EEG is optional in most.

On a separate but related topic, the South Carolina legislature in 1988 passed the Death with Dignity Act, stipulating guidelines for establishing living wills.¹⁶ If a patient meets the criteria for ICBF, then he is legally dead and the Death with Dignity Act does not apply. The complex questions raised by the Death with Dignity Act arise only if the patient fails to meet the criteria for ICBF. The clinical, ethical and legal questions raised by withdrawing or withholding life support in a patient with evidence of some brainstem function are beyond the scope of this article.

SUMMARY

With recent technological and medical advances, basic cardiopulmonary function can now be prolonged in many patients. Concurrently, organ transplantations have become more common and interest in living wills has increased. As a result, the South Carolina physician is increasingly obligated to determine whether a patient receiving cardiopulmonary support is dead due to irreversible cessation of brain function (ICBF) (brain dead). Here we review the bedside clinical valuation of brain death (ICBF), the adjunctive use of the EEG and other tests, and the South Carolina laws pertaining to this complex decision. □

TABLE 3
South Carolina's Brain Death Law¹⁵

§ 44-43-460. When an individual is deemed to be dead; standards applicable to determination.

An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions or (2) irreversible cessation of all functions of the entire brain, including the brainstem, is dead. A determination of death must be made in accordance with accepted medical standards.

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THE PATIENT/PHYSICIAN RELATIONSHIP IN THE MANAGEMENT OF DIABETES MELLITUS*

LISA H. BRYANT, M.D.
KAY F. McFARLAND, M.D.
PHILIP MICHELS, PH.D.

There is considerable evidence that psychosocial factors including social and professional support¹⁻³ influence adaption to chronic illnesses such as diabetes mellitus. Yet, there are a few studies on the effect of a physician-patient relationship in the management of diabetes. In a recent publication from the American Diabetes Association, the congruence of physician-patient goals was listed as one of the most important factors influencing treatment.⁴ However, even before goals are set physicians need to understand patients' primary concerns. Therefore, we undertook a study to determine what psychosocial factors are most important to diabetic patients and then to determine how well physicians understand these concerns.

METHODS AND RESULTS

In this study, 35 white, middle class, insulin dependent, ketosis prone diabetic individuals completed a questionnaire regarding the impact of diabetes on their lives. The questionnaire was devised by interviewing more than 100 Type I diabetic patients and listing their major concerns regarding diabetes. The answers to these questions were categorized and included in one of the following: (1) Difficulty adjusting to diabetes in general, (2) The amount of time and effort expended to obtain diabetic control, (3) Change and limitation of lifestyle, (4) Pain of injections and testing, (5) Expense of medical supplies, (6) Fear of complications or disability, (7) Fear of death, (8) Loss of self esteem, (9) Guilt from not follow-

ing medical regimen, (10) Resentment of time involved, (11) Anger at having gotten diabetes, and (12) Concern about hypoglycemia.

Then, 92 physicians were asked to complete the same questionnaire indicating how they perceived their diabetic patients felt about these same 12 items. The family physicians and internists were polled at a state medical society meeting, and endocrinologists/diabetologists at a regional diabetes research meeting. The mean values to the responses of the patients and physicians were compared using the student T test. Significant levels of 0.05 (*) and 0.02 (**) were used.

Patients' concerns ranging from the most to the least important, and the means of the patients' and physicians' responses to each question are given in Table 1. Duration of diabetes (average 10 years), age (average 30 years), and sex (25 female, 10 male), did not affect the scores on any of the 12 items involved. The item addressing the fear of complications or disability was given the highest mean score by the patients. The physicians' mean for this question was significantly different from those of the patients and it was ranked by the physicians as seventh of the 12 concerns. The only specialty of the physicians to rank this item first was psychiatry. Internists were able to identify correctly the relative importance of all the items, except the primary concern of patients, the fear of complications and disability.

Overall, the item given the highest score by physicians was the question regarding the change and limitation of lifestyle. Whereas physicians believed a change of lifestyle was a major problem, patients actually rated this item of only moderate concern. All physicians, across the specialties, felt this item to be of more importance to the patient than the patients' responses expressed.

Interestingly, the question regarding pain of

* From the Departments of Psychiatry (Dr. Bryant), Medicine (Dr. McFarland), and Family Medicine (Dr. Michels), the University of South Carolina School of Medicine, and the William S. Hall Psychiatric Institute, Columbia.

** Address correspondence to Dr. McFarland at 2 Richland Medical Park, Suite 502, Columbia, S. C. 29203.

TABLE 1
Patient and Physician Concerns About Diabetes#

	Patients	All Physicians	Family Med.	Psych.	Internal Med.	Endo.
Complications	6.6	5.2**	5.7	6.6	4.8**	5.3*
Adjustment	5.9	6.0	6.0	6.4	5.8	6.0
Control	5.7	5.9	6.3	5.5	5.2	6.3
Expense	5.1	5.4	6.2*	4.6	4.4	5.2
Hypoglycemia	4.9	4.7	4.3	4.8	5.0	5.8
Guilt	4.8	4.6	4.5	4.6	4.4	5.2
Lifestyle Change	4.8	6.1**	6.2**	6.2*	5.2	6.0
Anger	4.3	5.3	5.0	6.5**	5.2	5.2
Time Involved	4.2	5.5**	5.3	6.0*	4.8	5.4*
Death	4.1	4.1	4.2	5.9**	3.5	3.7
Self Esteem	2.8	4.0**	4.1*	5.0**	3.6	3.7
Injections	2.4	4.0**	4.4**	4.2**	2.7	3.7**

Mean value of the responses.

* $p < 0.05$

** $p < 0.02$

injections and blood sugar testing was given the lowest score by patients and also was ranked low by physicians although physicians did assign this item a significantly higher mean score. The mean score (5.1) assigned to all items by physicians was not statistically different from the patients' mean score (4.6).

A final question was used to verify the rank order of the 12 questions and showed again that the majority of patients fear most the complications and disability associated with diabetes. Only 16% of physicians, however, identified this as being the item of most concern to their patients. Thirty-one percent of physicians felt that limitation of lifestyle was of most concern to the patients. Only six percent of patients chose this as the item of most concern to them.

DISCUSSION

From these data it is obvious that physicians do not recognize that diabetic patients fear the long term complications more than any other aspect of the disorder. This is a realistic fear as diabetes is a leading cause of blindness and renal failure.⁵ The disease also increases the risk of heart disease⁶ which is the most common cause of death in most diabetic and non-diabetic individuals.

Most physicians link high glucose levels with the development of diabetic complications. Many believe that if patients were made aware of this association they would be more diligent

or motivated to "control" their blood sugar. Inadvertently this places the responsibility of whether or not complications develop on the patient and his or her ability to maintain normal glucose levels. It is not surprising that, after the fear of complications, patients in this study were concerned most about their ability to adjust to diabetes and control their blood sugar.

Yet, even with maximal effort by both patients and physicians, complications related to diabetes cannot be eliminated.^{7, 8} The ongoing multicentered diabetes control and complications trial⁹ is designed to answer questions regarding the possible relationship of hyperglycemia and complications, as well as other risks and benefits of tight control. While the importance of maintaining as normal glucose levels as possible deserves attention, the impossibility of perfect control also needs to be acknowledged. The consequence of maintaining the illusion that perfect control can be obtained often leads to discouragement and guilt.

More time spent listening to patients' concerns would form a firmer basis on which physicians could devise a therapeutic program which would address both the patients' physical and emotional needs. Just understanding patients' primary concerns may enable physicians to support, as an ally, diabetic patients' struggle to prevent and delay complications, which is clearly their greatest concern. This approach would positively affect the patient-

physician relationship by emphasizing a major treatment objective, that of increasing physician-patient congruence of goals.

SUMMARY

Patients with Type I diabetes mellitus are most concerned about the possibility of developing complications or disability related to their disease and really have very little concern regarding the pain of insulin injections or blood sugar monitoring. Just understanding patients' primary concerns may enable physicians to devise a more effective therapeutic program as well as enhance the patient-physician relationship. □

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MYASTHENIA GRAVIS: A REVIEW WITH EMPHASIS ON THE POTENTIAL ROLE OF THYMECTOMY*

ANDRE H. HEBRA, M.D.
CAROLYN E. REED, M.D.**
MAUREEN HELDMANN
MARY JOE BLACK

Myasthenia gravis is an autoimmune disorder of neuromuscular transmission characterized by weakness and fatigue of voluntary muscles.¹ A relationship between myasthenia gravis and abnormalities of the thymus gland has been recorded since 1901. In 1941, Blalock demonstrated that removal of a nontumorous thymus gland could lead to clinical improvement.² Despite conflicting reports of the value of thymectomy since that time, studies have suggested that many patients obtain sustained remission after thymectomy and require little or no additional anticholinergic medication.³

This report reviews the current literature on myasthenia gravis with emphasis on the diagnosis and management of this disease. We also review our 10-year experience with the treatment of myasthenia gravis by complete trans-sternal thymectomy.

CLINICAL MANIFESTATIONS OF MYASTHENIA GRAVIS

Myasthenia gravis is a disease that may affect any age group but clusters of cases are found among young women and older men. The hallmark of the clinical picture is muscle fatigue following exercise. The intensity of the symptoms varies and spontaneous remissions are known to occur. The disease is incapacitating and life-threatening if untreated. Ptosis and diplopia are found in the vast majority of cases, indicating ocular muscle involvement. Bulbar, neck, limb girdle, and distal extremity muscle all may be involved in this order of

frequency.³ The modified clinical classification according to Osserman is presented in Table 1.

TABLE 1. Clinical Classification of Myasthenia Gravis, and Response to Drug Therapy, After Osserman

Group	Muscle Involvement	Response to therapy
I. Ocular:	Ocular only; ptosis, diplopia	Good to prednisone
II. Generalized:		
A. Mild:	Ocular frequent, gradual spread to skeletal and bulbar. No respiratory involvement.	Good
B. Moderate:	Frequent ocular, gradual onset, more severe bulbar and skeletal. Some dysarthria, dysphagia, and mastication problems. No respiratory involvement.	Fair
C. Severe:		
1. Acute fulminating:	Rapid onset, severe bulbar and skeletal. Early respiratory involvement. Thymoma is common.	Fair to Poor
2. Late severe:	Severe symptoms about two years after onset.	Poor

Many consider myasthenia gravis to be the result of an immune attack, and the disease can be seen with other autoimmune disorders such as systemic lupus erythematosus, rheumatoid arthritis, and polymyositis. Thymic abnormalities are found in 80 to 90 percent of patients with myasthenia gravis. The vast majority of these patients have thymic hyper-

* From the Department of Surgery, Division of Cardiothoracic Surgery, Medical University of South Carolina, Charleston. Ms. Heldmann and Ms. Black were senior medical students at the time of this study.
** Address correspondence to Dr. Reed at the Department of Surgery, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S.C. 29425-2279.

plasia manifested primarily by the presence of germinal centers. Thymomas are found in 10 percent of patients with myasthenia gravis (up to 40 percent have been considered malignant based on the finding of local invasion at surgery).

EVALUATION OF PATIENTS WITH SUSPECTED MYASTHENIA GRAVIS

Figure 1 is a representation of the diagnostic approach to patients suspected of having myasthenia gravis. It is important to search for associated disease (particularly thyroid dysfunction).³

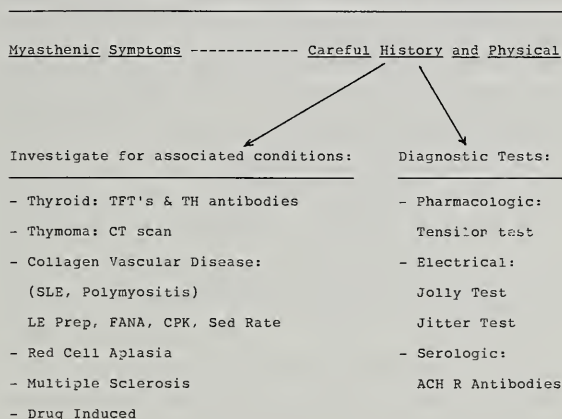
When the clinical history and examination suggest myasthenia gravis, the Tensilon (edrophonium) test is indicated. The drug will cause transient inhibition of acetylcholinesterase enzyme, enhancing the effects of acetylcholine, and temporary clinical improvement results. Eighty to 90 percent of patients will have a positive response. Electrical tests are also of value in establishing the diagnosis of myasthenia gravis. The Jolly test is based upon the amplitudes of succeeding muscle action potentials following repetitive nerve stimulation. A newer technique uses single-fiber electromyography to provide a measure of "jitter" in myasthenia gravis. Results are improved when several muscle groups are tested.¹

Measurement of the specific antibody to the acetylcholine receptor is available, and they can be found in 90 percent of patients with myasthenia gravis. The antibody titer, however, does not correlate with the clinical state of the disease.³ Chest radiography and CT scan of the anterior mediastinum are important in the detection of thymomas. Despite all current diagnostic measures, some thymomas may not be identified preoperatively.

TREATMENT OF MYASTHENIA GRAVIS

Therapy may be aimed at the receptor (anticholinesterase agents) or at the immune disorder (steroids, immunosuppression, plasmapheresis, thymectomy), as outlined in Table 2. When findings are restricted to the ocular muscles, thymectomy is not recommended. When generalized symptoms of myasthenia develop, thymectomy should be considered, and per-

FIGURE 1. Schematic Diagram of the Diagnostic Approach to Patients Suspected of Having Myasthenia Gravis



forming the procedure as soon as possible after the generalized symptoms appear is advocated by many proponents as optimizing results.^{1, 3-10} Medical treatment is employed to obtain the best possible myasthenic status and to minimize the risk of the surgical procedure prior to thymectomy.

Role of thymectomy in the treatment of myasthenia gravis

Most authors agree that in individuals with an established diagnosis of myasthenia gravis who have any generalized symptoms (Osseman's Group II A, B, and C) are candidates for early thymectomy. Ordinarily, Group I patients (ocular involvement only) are least likely to respond to thymectomy, and they can be managed with anticholinesterase medication

TABLE 2. Treatment Options for Myasthenia Gravis

Clinical Presentation	Treatment
Ocular Myasthenia	Conservative therapy: Steroids (low dose)
Generalized Myasthenia	Medical therapy: —Anticholinesterase agents —Plasmapheresis —Steroids —Immune Suppression Surgical therapy (Thymectomy): —Transcervical —Transsternal —Maximal thymectomy (transcervical transsternal)
Thymoma	Thymectomy (regardless of clinical presentation)

and steroid therapy. When ocular symptoms are interfering with normal activities or work, surgery may provide some response.^{10, 15}

Thymectomy can be carried out in patients with myasthenia gravis with low morbidity and mortality rates and with an 80 percent expectation of clinical improvement. Thymectomy is the only treatment modality that offers the possibility of a complete remission with no need of any further therapy.⁴

Surgical approaches for thymectomy include the following: 1. transcervical thymectomy; 2. median sternotomy; 3. partial median sternotomy; 4. median sternotomy plus cervical incision; and 5. upper median sternotomy combined with transsternal sternotomy. Most surgeons perform thymectomy through an anterior sternal splitting incision. This approach allows excellent visualization of the thymus gland, its vascular attachments, and perithymic tissue. Extended transsternal thymectomy with exenteration of anterior mediastinal fat and soft tissues is the procedure of choice in our institution because it allows removal of ectopic foci of thymic tissue lying in the mediastinal fat.^{3, 4} The transcervical approach¹³ and the "maximal thymectomy," a combined transcervical transsternal en bloc resection,¹⁴ have been reported with comparable results. Jaretzki et al. stated that results of maximal thymectomy are better than those reported for classic transsternal or transcervical procedures, but further studies are necessary before this radical operation can be recommended.

Analysis of the M.U.S.C. experience

Between July 1979 and June 1989, 12 consecutive patients with myasthenia gravis were treated by thymectomy. Their ages range from 11 to 56 years (mean 29 years, median age 24 years). Eight patients (67%) were less than 25 years old. One patient had the late onset type of myasthenia gravis and she was 56 years old. Only one was a male patient, the remaining (92%) were females. The interval from first symptoms of myasthenia gravis to thymectomy varied from two months to 17 years, with mean interval of 49 months (median eight months). Nine patients (75%) had gradual onset of symptoms, and three (25%) had rapid

TABLE 3. MUSC Experience: Clinical Status of Patients (Modified Osserman Classification)

Group	Number of patients	Percentage
I. Ocular only	1	8%
II. Generalized		
A. Mild	3	25%
B. Moderate	4	33.5%
C. Severe	4	33.5%

progression to the severe form of the disease. The clinical status of the patient was assessed according to a modification of the Osserman Classification (Table 3). Ninety-two percent of the patients had generalized myasthenia gravis. Ocular involvement was present in 50% of the patients, and other cranial nerves were affected in 75% of them (impaired chewing, dysarthria, and facial weakness). Exclusive ocular involvement was noted in one patient.

Acetylcholine receptor antibodies were obtained in nine patients prior to surgery. Two had normal levels (less than 0.5 nM/l) and seven had levels ranging from 0.6 to 30 nM/l (mean 11.7 nM/l). Eleven patients had a positive tensilon (edrophonium) test with significant improvement of muscle weakness, and one had a non-conclusive test prior to surgery. Electrophysiologic studies were performed in nine patients, and eight had impaired neuromuscular transmission compatible with the diagnosis of myasthenia gravis. All patients were on anticholinesterase medication (pyridostigmine) for symptomatic relief. Corticosteroids (prednisone) were used in five patients, and two required immunosuppressive agents (azathioprine) in managing refractory myasthenia gravis. Preoperative plasmapheresis was employed in three patients resulting in transient improvement.

All thymectomies were performed through a median sternotomy incision with total extracapsular excision of the thymus, including anterior mediastinal fat and soft tissues. Acetylcholinesterase inhibitors were continued after surgery only if significant disability persisted or when patients deteriorated. There was no operative mortality; morbidity was minimal and limited to one patient that had left lung atelectasis on the second postoperative day. One patient developed avascular necrosis of both hips three years after surgery due to prolonged corticosteroid therapy. On histo-

pathological examination of the excised thymus, hyperplasia was present in seven (59%), thymoma in one, and in four the thymus was found to be without histologic abnormality.

The patient's response to operation was graded according to a modification of Osserman's scale (Table 4). Long term follow-up was available in all but one patient. The mean follow-up time was 30 months (range of eight months to seven years). Overall improvement was obtained in 82% of the patients. Significant improvement was usually delayed for several months following surgery; of the four patients with complete remission (response grade A) only one was symptom free in the early postoperative period. It was evident that early response (up to 30 days after thymectomy) did not correlate to late results. Five patients with early grade of response C or D progressed to grade A or B in the late follow-up period.

TABLE 4. MUSC Experience: Grade of Response to Thymectomy According to Modified Osserman Scale

<i>Response Grade:</i>	<i>Number of Patients</i>	<i>Percentage</i>
A. Complete remission, off all anticholinesterase medications	4	37%
B. Symptom free, on decreased dose of medication	3	27%
C. Clinical improvement, with no change in medications	2	18%
D. No improvement, medications unchanged	2	18%
E. Clinically worse, requiring new medication	0	—

Some authors have reported better response to thymectomy in cases with thymic hyperplasia.^{5, 9} Others have concluded that the presence or absence of hyperplasia does not correlate with clinical response.^{4, 8, 11} In re-

viewing our experience, we noted improvement after thymectomy irrespective of the type of thymic pathology. All four patients with histologically normal thymus glands, and three of seven with hyperplasia achieved a Grade A or B response. The single patient with thymoma had minimal improvement with surgery. Remission has been reported in only 10 percent of the cases when there is a benign thymoma. When the tumor becomes invasive, remission is even less likely and the five-year survival rate is less than 50 percent. It is thought that early intervention in patients with thymic tumors may reduce the likelihood of local invasion.³

The palliation rate (patients achieving improvement as well as remission) is not related to the type of early response to thymectomy. Improvement may be delayed for three to five years following surgery.^{1, 3} Hankins et al.⁴ reports maximal response within six to 12 months after thymectomy.

Most authors agree that early thymectomy enhances the likelihood of permanent remission. Moreover, the patients are generally less severely affected and better able to tolerate the operation.^{4, 16} In our experience, the response was independent of the preoperative duration of the disease, and was often delayed.

SUMMARY

Review of our results with thymectomy for myasthenia gravis supports the role of early surgery for this debilitating and often lethal disease. The data presented here confirm the fact that thymectomy has rare complications and low operative mortality. Approximately 80 percent of patients with myasthenia gravis can expect clinical improvement with surgery, which also offers a chance for complete remission. □

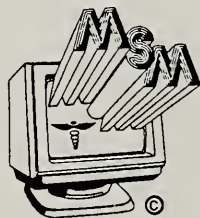
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THE ANNUAL MEETING OF THE AMA REPORT OF THE SCMA DELEGATION

JOHN C. HAWK, JR., M.D.*

The Annual Meeting of the House of Delegates of the AMA, held in Chicago, June 24-28, 1990, was a remarkably calm, peaceful, non-controversial affair. Just why this was the case is hard to say. Perhaps it was because a few days earlier we had all received the announcement that Dr. James S. Todd had been named the Executive Vice President by the Board of Trustees on June 19, 1990. This forestalled any major controversy about Jim Sammons' successor as EVP, and that helped prepare the way for what was touted as a new era of the AMA.

Perhaps major credit can be given to Speaker John Clowe and Vice Speaker Stormy Johnson for their excellent preparation for the meeting, and for a number of innovations which helped keep things under control and moving more rapidly than usual. These included the limitation of debate to three minutes per speaker, right from the start; conducting nomination of candidates on Sunday afternoon and completing the elections on Wednesday, except for one supplementary ballot required by Roy Deffebach's resignation from the Council on Medical Service; and designating a number of Board and Council reports as Informational only. Perhaps--and this would be the worst case scenario for the future of American medicine, as far as I am concerned--it was because so many of the delegates feel so frustrated by the many intrusions of government in the practice of medicine, and medicine's apparent inability to stem the tide, that they are ready to give up the fight, or have already done so.

As outlined in the June 29 issue of AM News, Jim Todd has very impressive credentials, and I believe most delegates who know him well feel that he will do an excellent job as the new EVP.

VOLUME OF BUSINESS CONSIDERED

The House faced a monumental volume of business. Whether it was a record number of items is hard for me to say without a review of all past years. In any case, there were 295 Resolutions (including four late Resolutions accepted by the House), 110 Reports from the Board and various Councils (including 30 that were considered only Informational and not referred to Reference Committees). There were also seven speeches or reports of officers which were referred to Reference Committees.

*30 Bee Street, Charleston, S. C. 29403

PRESIDENTIAL ADDRESSES

Outgoing President Alan R. Nelson gave his departing address to the House on Sunday afternoon, entitling it "The Business at Hand and the Challenges Ahead." He has been a strong leader during a year which has witnessed the surfacing of many problems. He emphasized the importance of Health Access America and stated "We must take our place at our patients' side. We must position ourselves as guardians of the public health, not guardians of self interest."

Dr. C. John Tupper of California was inaugurated as the 145th President of the AMA on Wednesday afternoon. He entitled his stirring inaugural address "Dreams, Dollars and Deeds: The Sacred Fire and Health Access America." You should read and indeed study both of these important addresses, which I'm sure will be published in full in JAMA in the near future.

DOMINANT ISSUES

No single issue dominated the proceedings of this Annual Meeting. After listening to the debate for over four days, and reviewing all the Reference Committee reports and my notes taken during the debate, I would pick the following three topics as probably the most important: (1) access to health care; (2) concerns with PROs and their intrusions into the practice of medicine and the delivery of appropriate care to our elderly; (3) Medicare regulations relating to payment for services, including implementation of the RBRVS.

(1) ACCESS TO HEALTH CARE

In Report XX the Board gave in detail what has been done since the Interim Meeting last December to develop, present to the medical profession, and promote to the general public Health Access America, the 16-point program designed to make available adequate medical care to the many people who are said to have dropped through the cracks in the past. As noted above, both Dr. Nelson and Dr. Tupper emphasized the importance of this program.

A majority of the delegates appeared to agree with most of the proposals, although there were certainly questions about the mandate that all employers, including those in small business, provide insurance for their employees. Underlying the whole proposal is the tacit assumption that medical care is a "right" with which many physicians would disagree. In my personal opinion, the most thoughtful, and indeed the definitive article on this subject was written almost 20 years ago by Dr. Robert M. Sade, now Professor of Pediatric Thoracic Surgery at MUSC, and a member of the SCMA Medical Ethics Committee. It was published in the New England Journal of Medicine on December 2, 1971, and was entitled "Medicare Care as a Right: A Refutation." You should all obtain a copy of this article and study it carefully.

In connection with the subject of access to medical care, at the OSMAP (Organization of State Medical Association Presidents) on Friday afternoon, Dan Brake presented the development of and the salient features of Health Care 2000, the program developed here in South Carolina for which he was personally responsible during his tenure as SCMA President. This received kudos from almost everyone present and he had many requests for copies of the published report.

The medical profession, and the general public as well, will undoubtedly be kept fully informed of the implementation of the AMA proposal.

(2) CONCERNS WITH PROs

A long and detailed report from the Council on Medical Service and over a dozen Resolutions (including our own S.C. Resolution-see below) addressed various aspects of problems with PROs. In addition, many Resolutions and several Reports dealt with similar problems which have arisen with private insurance, such as preadmission certification, retroactive denials of benefits, sanctions of various types, utilization review programs, etc. Among other actions taken, the House asked the AMA to review the existing data to determine if the savings to the Health Care Finance Administration effected by PROs are greater than expenses incurred by the PROs and physicians themselves, and also asked that this information be publicized as soon as it is available. There are many who feel that the government is actually losing money on this program and certainly that there is a tremendous "hassle" factor to practicing physicians.

(3) MEDICARE REGULATIONS--IMPLEMENTATION OF RBRVS

The concerns expressed by physicians from different areas of the country and in different types of practice were varied and diverse. There were numerous Resolutions, including our own (see below). Among the important positions adopted by the House were the following:

1. That the AMA adopt the position that any patient, regardless of health care insurance coverage, has both the right to privately contract with the physician and to personally pay for those services when they are not adequately covered or deemed unnecessary by the health care plan.

2. That the AMA pursue appropriate legislative and legal means to permanently preserve the patient's basic rights to privately contract with physicians for wanted or needed health care services.

3. That the AMA continue to expeditiously pursue regulatory or legislative changes that will allow physicians to treat Medicare patients outside current regulatory constraints

that threaten the physician-patient relationship. Also, the AMA will seek documentation of cases where patient-physician rights to privately contract have been denied or impaired.

Milton Davis, speaking for the Texas Delegation, repeatedly brought out the benefits of having an Indemnity Payment System to eliminate some of the current Medicare problems. The AMA was also asked to determine as accurately as possible the administrative costs of health care (now estimated to be around 22 or 23 percent) and to insist that HCFA distinguish between physician and non-physician costs of Part B of Medicare.

SOUTH CAROLINA RESOLUTIONS

Our Delegation submitted two resolutions which have been of concern to our own House of Delegates and to our Board of Trustees.

The first (Resolution 82) dealt with the 1991 limitations on "Physician's Charges to Medicare Patients." It was considered by the Reference Committee and the House, together with a number of other Resolutions dealing with problems arising out of the implementation of OBRA 1989. We felt that our concerns were appropriately addressed by the following substitute:

"Resolved, That the American Medical Association continue to seek to halt the 1991 implementation of new limits on physician charges for Medicare patients of 125% of the Medicare prevailing charge or the MAAC, whichever is less, and convey its concerns to the Congress over the discriminatory nature of this 1991 implementation of charge limits on rural, primary care, and other affected physicians."

The AMA was also directed to seek immediate repeal of the OBRA-89 requirement that all physicians (including "non-participating" physicians), submit all Medicare claims on behalf of their patients starting September 1, 1990.

The second Resolution (#81) asked the AMA to vigorously oppose any further expansion of Peer Review Organization (PRO) activities in reviewing charts of Medicare patients in physicians' offices, as is being carried out in a pilot project by the Wisconsin PRO and six other PROs, "until such a time when it can be clearly demonstrated and documented that such review is cost-effective, genuinely educational to the practicing physicians involved, not disruptive to physician-patient relationships, and productive of improved quality of care for patients." We believe that such a time will never arrive. This Resolution was placed on the consent calendar by the Reference Committee and was adopted without debate by the House.

OTHER ISSUES OF NOTE

Since I have had to meet a July 5th deadline in order to get

this report in the current issue of The Journal of the South Carolina Medical Association, I do not know when the actions of the House of Delegates will be reported in the AM News. However, I feel sure that as in the past at least two issues of this publication will give detailed reports of the meeting. You are urged to read these carefully in order to keep more fully informed. Following are some of the other issues and actions which our delegation considered particularly important:

- o Referred to the Board for decision and report back in December a Resolution asking the AMA to urge HCFA to eliminate the "participating" and "non-participating" classifications and to substitute terminology more acceptable to the Board.

- o Reaffirmed the AMA's opposition to the Medicare Maximum Allowable Actual Charge (MAAC) limits and asked the AMA to seek the development of uniform HCFA policy regarding the interpretation of MAAC compliance regulations by all Medicare carriers so that when Medicare is the secondary payor, MAAC limits will not apply.

- o Referred to the Board for report back in December a Resolution from the Georgia Delegation asking for a special subcommittee of the Council on Medical Service to serve as the Medicare Watchdog Committee for the purpose of monitoring in detail the Medicare Laws, formal Rules and Regulations, and published "Memorandum to Carriers", and to provide concise and meaningful information and interpretative guidance to individual AMA physicians on a regular basis.

- o Asked the Board to request that the CPT Editorial Panel consider approaches to modify CPT so as to better allow physicians to report their services associated with obtaining precertification (e.g. adding a new code(s)) in the CPT "Special Services Reports".

- o Asked the AMA to urge its constituent medical associations to seek the enactment of legislation requiring that utilization review for insurers be conducted by physicians licensed by the state in which they are doing the review and also that they seek enactment of legislation that would require all agencies or groups doing utilization review to be registered with the appropriate health regulatory agency and that they have an appropriately staffed office in the state. It should be noted that we have accomplished part, but not all of this, in South Carolina.

- o Adopted a Board Report which states that in the absence of consistent and scientifically established evidence that preadmission review is cost saving or beneficial to patients, the AMA strongly opposes the use of this process.

- o Asked the AMA to vigorously oppose the proposed Medicare regulation that would deduct the fee for an assistant

surgeon from payment to the primary surgeon.

- o Studied in detail Board Report KK in regard to minimum benefits in required employers health insurance. A motion to change Family Planning from "non-covered" to "covered" was not adopted by what seemed to me to be a dubious voice vote. Various other motions to change covered and non-covered items were not adopted.

- o Asked the AMA to work with HCFA and other payors to allow identification of the specialty and subspecialty of the physician who provides each service, for the purpose of recognizing jointly provided medically necessary services such as concurrent care.

- o Asked the AMA to amend its bylaws to state that it and all of its constituent associations shall not discriminate against anyone, except on the basis of professional competence. This was in response to Resolutions from the District of Columbia (similar to one they introduced at I-89), the Medical Student Section, and the Resident Physician Section, all asking for the words "sexual orientation" to be added to the list of items for which membership could not be denied or abridged, as specified in 1.50 of the bylaws. We considered this a "non-issue," as no cases of such discrimination were cited. We felt that the solution proposed by the Reference Committee and adopted by the House was excellent and will keep this inappropriate issue from coming back to us year after year.

- o Discussed in detail the National Practitioner Data Bank, and asked the AMA to notify its members of the AMA resources available to assist individual physicians having difficulties with the Data Bank.

- o Asked the Board to continue to develop policies for maintaining the AMA in a leadership position with regard to practice parameters.

- o Referred back to the Council on Ethical and Judicial Affairs (CEJA) its Report D on the testing of patients for HIV infections, in which there were still a number of items which were controversial.

- o Referred back to the CEJA the guidelines that had been developed for the appropriate use of "do not resuscitate" orders. This was by a counted vote of 200 to 159.

- o Determined that when it is in the best interest of their patients, physicians and tertiary hospitals should be encouraged to transfer patients back to hospitals in their home community. The AMA was asked to support any needed revision in Medicare regulations that will allow appropriate reimbursement to the home community hospitals.

o Asked the AMA to begin immediately to seek comprehensive reform to reduce the administrative inefficiency, burdens and expenses involved in paying for health care services, and urged that all proposals to increase access to health care also address the need to reduce administration costs and burdens.

o Adopted the principle that the indication for a diagnostic test is based on the suspected diagnosis of a clinical disorder and that a test with normal results is not de facto "unnecessary."

o In response to Board Report KKK and four separate resolutions, adopted a strong resolution protesting the proposed regulations for implementing the Clinical Laboratory Improvement Amendments of 1988.

AMPAC REPORT

Randy Smoak of our own Delegation, Chairman of AMPAC for the second year, gave an excellent report of the accomplishments of both the national and state political action committees. Our Delegation feels that Randy is an extremely able and viable candidate for the Board of Trustees for the AMA, and we have determined to nominate him for this position at the June 1991 meeting. We will be making plans for his campaign in the immediate future, will keep the membership apprised of the steps we are taking, and will give members an opportunity to assist in this important project.

ELECTIONS

The House of Delegates, despite the relatively peaceful tone of the meeting as a whole, "sent a message" to the Board of Trustees that they weren't pleased with the course of events during the past year, by failing to reelect two incumbents, John Dawson and Ray Gifford. Robert McAfee of Maine, and Joe Painter of Texas, both regarded as exceptionally strong Board members were returned to the Board on the first ballot, for full three-year terms, together with a newcomer, Pamela Formica, Immediate Past Chairman of the Council on Long Range Planning and Development. On the first runoff for the fourth full term, John Seward, outgoing Chairman of the Council on Legislation, won election over Ray Gifford.

After completion of the election for the four Trustees for terms ending in 1993, the remaining candidates were eligible to run for John J. Ring's unexpired term. Ray Gifford withdrew from this runoff; John Dawson and Russell Patterson were defeated and made gracious statements to the House. Tom Reardon of Oregon, who has been instrumental in setting up and insuring the success of the Hospital Medical Staff Section (HMSS), was elected to the Board over George Bohigian of Missouri.

John J. (Jack) Ring was unopposed for President-elect, John Clowe for Speaker, and Stormy Johnson for Vice Speaker, and all three were elected by acclamation at the time of nominations on Sunday.

SCMA DELEGATION

The SCMA was represented by Randy Smoak, Don Kilgore, and John Hawk, Delegates; Charlie Duncan, Dan Brake, and Walt Roberts, Alternate Delegates; John Simmons, President; Ed Catalano, Chairman of the Board, Chris Hawk, President-elect; Bill Mahon and Barbara Whittaker, Staff. Steve Hulecki and Gerald Harmon represented the Young Physicians Section (YPS) and were able to meet with our caucuses when their schedules permitted. Mark Milburn, President, and Lorenzo Simpson, Vice President of the MUSC Student Body, as well as Chris McManus, President at USCSM, were present for the Student Section meetings. We were also pleased to have eight residents present, including four who were attending under the auspices of the Burroughs Wellcome Company in recognition of their community services. We were sorry that we did not get to see more of the auxiliary members who were meeting at the Drake, at the other end of Michigan Avenue's Miracle Mile.

CONCLUSION

As in past years, all of the members of your delegation express sincere appreciation for the opportunity of representing you, our members, at the AMA House of Delegates meeting. We are always open to, and indeed would welcome, any suggestions and opinions from any members. We will also welcome any of you at our caucuses, and we remind you that you are fully eligible to speak to Reference Committee hearings.

The Interim Meeting will be held in Orlando, Florida, December 2-5, 1990, and the next Annual Meeting will be in Chicago, June 23-27, 1991.

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YOU AND THE PRO

JOHN W. RHENEY, JR., M.D.*

Providers of care say that Peer Review Organizations (PROs) inappropriately second-guess medical decisions, while consumer groups charge that the organization places too much emphasis on cost-containment and overlooks problems in quality care. PROs are called "Gestapo agents" by some physicians and "Physician Oriented Protective Services" by some consumer groups.¹

Which are we? Really, neither!

Although some public sector Utilization Review (UR) existed prior to 1965, a major expansion of UR activity occurred as a result of the 1965 Medicare and Medicaid legislation, which included mandatory provisions for hospitals to establish UR committees. Amendments to the Social Security Act in 1972 established Professional Standards Review Organizations (PSROs) to monitor medical care provided to beneficiaries, thereby creating a review entity independent of hospitals. Beginning with passage of the Tax Equity and Fiscal Responsibility Act of 1982, responsibility for review of the appropriateness as well as the quality of care was passed to newly created Utilization and Quality Control Peer Review Organizations (PROs).

In South Carolina, the South Carolina Medical Care Foundation was the initial PSRO. It was succeeded by Metrolina, a North Carolina Peer Review Organization, which, in turn, was replaced by the present PRO, Carolina Medical Review (CMR). CMR is a subsidiary of Medical Review of North Carolina (MRNC), which has been the PRO in North Carolina for five years.

With this brief history behind us, let us now proceed to how you and the PRO interact. How is a chart selected for review and how does the review proceed? Attached are two flow charts which depict the process of Quality Review for Inpatient Hospital Generic Screens, Other Than Inpatient Hospital Qual-

ity Screens, and Outpatient Surgery Generic Screens.²

There are certain cases which are screened on a preadmission/preprocedure basis. They are permanent cardiac pacemaker implant/replacement, cataract extraction (lens procedure), total cholecystectomy, inguinal hernia repair, major joint replacement, endarterectomy of other vessels of head and neck, coronary artery bypass graft, percutaneous transluminal coronary angioplasty, transurethral resection of the prostate, and hysterectomy.

After the above cases, and any additional required review, are selected, three percent of all discharged Medicaid, Medicare and CHAMPUS charts are randomly selected by computer for review.

These charts are initially reviewed by non-physician reviewers. HCFA Generic Screens and CMR Discharge Screens are used. These non-physician reviewers may pass charts, but may not fail a chart. If the reviewed chart fails the screen, it is passed on to a physician consultant (PC). Physician consultants do not use criteria in reviewing charts. Physician consultants are urged to place themselves, as nearly as possible, in the attending physician's shoes, at the time of admission. They ask, "At this point, was the decision of the attending physician in the best interest of the patient?" Following the patient's course through the hospital, they again ask, "Were the decisions reached by the attending physician, at that particular time, logical and good medical practice?" On discharge, "Did the attending physician give the patient clear and concise instructions on the medication, activities, follow-up, etc.?" And very importantly, did the attending physician document this in the record?

There are three levels of severity:

Level I is "medical mismanagement" without the potential for significant adverse effects on the patient.

Level II is "medical mismanagement" with

* Carolina Medical Review, 101 Executive Center Drive, Columbia, S. C. 29210.

the potential for significant adverse effects on the patient.

Level III is "medical mismanagement" with significant adverse effects on the patient.

Let me hasten to add that the term "medical mismanagement" is what upsets physicians more than any thing else. It is equally disliked by the PROs. All of the PROs in the United States have attempted to have it changed, but HCFA remains adamant on its use. At a recent meeting of the American Medical Peer Review Association (AMPRA), the organization again petitioned HCFA to change the term "medical mismanagement" to something less offensive.³ So far, the appeals have fallen on deaf ears.

Following our schematic drawing, you will note that these charts are reviewed by a series of PCs, any one of whom may rule that there is no problem and the review comes to a close at this point.

Should it finally be determined by the first PC that the case is of a Level I severity, it is placed in the data bank for quality profiling. Should the physician or institution have three Level I cases per quarter or five per bi-quarter, he, she or they will undergo additional physician review.

On the other hand, Severity Levels II and III are referred for physician review, followed by a 30-day letter, calling for further information and review by PC3 after a response has been received.

If PC3 also finds a quality problem, a severity weight is assigned and a notice of final determination to the responsible parties is mailed. Following this, any indicated quality intervention is initiated.

In general, things are going well with Carolina Medical Review after one year. There is one particular area in the review process which has caused some confusion. It involves telephone calls. If a question is raised regarding either utilization or quality of care, the 20 or 30 day letters contain the following:

You may wish a telephone conference with a PRO physician or non-physician representative, as appropriate, concerning this case. To arrange for this, you should specifically request a telephone conference in your written response.

A case will only be reviewed again if there is a written response within the number of days specified in the letter. Telephone calls must be requested in this reply. There is no other point in the review process which allows for telephone calls. Calls are made by physician consultants in the PRO offices to discuss the clinical aspects of these cases. They generally will not be in your specialty. They do not make final decisions and so cannot give you any results during the call.

Most doctors are individualists and do not take well to having their practices monitored. However, the PRO is here and it is not going away. To compare CMR with other PROs, the following is for your information:

Under Metrolina, denial of hospital admissions was 5.7%. Under CMR, it is currently 1.8% of cases reviewed.⁴ National statistics show that the denial rate for PROs throughout the country averages 2.1%. The SuperPRO, or PRO that reviews the state PROs, has a denial rate of 16.5% in South Carolina.

It has even been suggested that review should be conducted by computer or removed from the local medical community and performed by physicians accountable to a more autonomous UR organization.⁴

If it is difficult to discuss a case with a peer, think about talking to a computer.

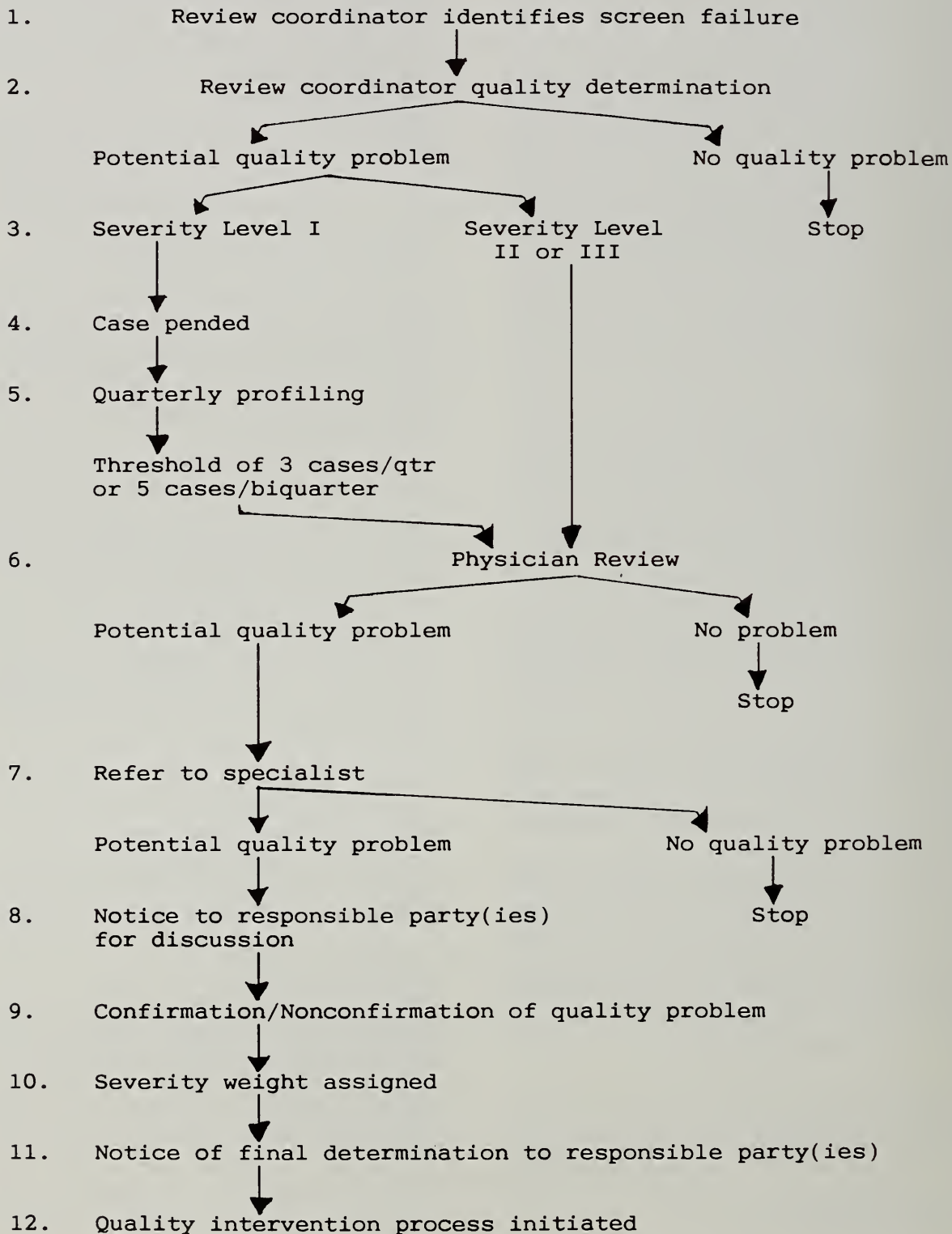
In closing, I would emphasize two things. (1) Document! A large portion of our charts fail initially, then pass when the physician sends an explanatory letter regarding material not on the chart. (2) Do not forget admissions for observation. Physicians should base their decisions to use inpatient care versus 24-hour observation on medical evidence available to them at the time a patient presents at the hospital. If medical evidence at that time indicates the patient needs inpatient care, the patient should be admitted.

Physician consultants should not cite the attending physician for an unnecessary admission if the medical evidence on admission—evidence explicitly documented in the medical records—indicates an acute stay is warranted. This is true even if the patient's condition later evolves into a condition that normally does not warrant acute medical attention.

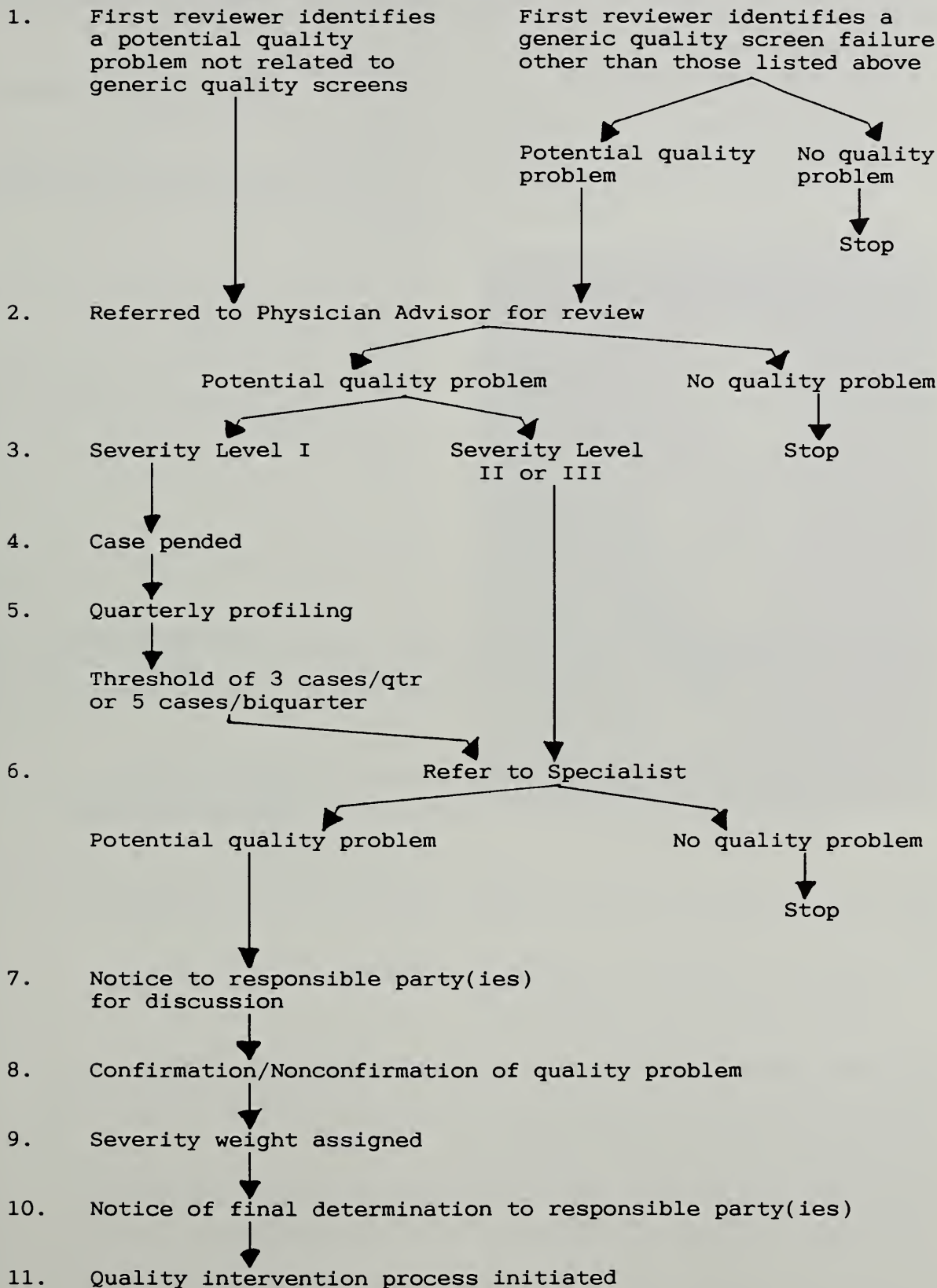
Physicians should consider the following

QUALITY REVIEW PROCESS

A. Inpatient Hospital Generic Screens 1, 4, 6b and 6e, HHA Screens 5 and 6, and Outpatient Surgery Generic Screens 1a, 1c, 4 and 5



B. Other Than Inpatient Hospital Generic Quality Screens 1, 4, 6b, and 6e HHA Screens 5 and 6, and Outpatient Surgery Generic Screens 1a, 1c, 4 and 5



when making the decision to admit a patient versus placing the patient in a 24-hour observation setting:

- (1) The severity of the signs and symptoms exhibited by the patient.
- (2) The medical predictability of the patient suffering an adverse consequence.
- (3) The need of diagnostic studies that appropriately are outpatient services to assist in determining whether to admit the patient (i.e., the tests do not ordinarily require the patient to remain in the hospital for 24 hours or more); and
- (4) The availability of diagnostic procedures at the time the patient presents to a particular facility.⁵

After 24 to 36 hours, if the patient's condition warrants, then his or her regular admission can be arranged. Just document on the chart the justifiable reasons for the change of status.

It should be emphasized that the medical advisor does not make decisions regarding utilization or quality of care issues. These deci-

sions are made by PCs, and the medical advisor has no authority to reverse them. However, the medical advisor is willing to discuss specific problems pertaining to the review process with any concerned physician. □

ACKNOWLEDGMENT

I would like to thank Becky Sigmon and Blake Williams for their help in preparing this article.

ADDENDUM

Since this article was submitted for publication, HCFA has yielded to requests by AMPRA, MRNC and CMR to change the term "medical mismanagement" to "confirmed quality problem."

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Editorial

GAVIN

He once said he was "just a country doctor," but to those who knew Dr. J. Gavin Appleby, those humble words don't even come close.

The State, May 18, 1990, page 1.

The year was 1976; the place the Landmark Hotel in Myrtle Beach; the setting my first SCMA annual meeting. As Ed Kimbrough and I walked down a corridor, we heard a great commotion from one of the reference committees. Peeking in, we found in progress a spirited and rather acrimonious debate. It was soon obvious that one man would not be easily swayed. Tall, straight, impassioned, unhesitating, and articulate, he looked like he had stepped right out of one of George Caleb Bingham's oil paintings of 19th Century stump speakers. Ed whispered: "That's Gavin."

My first impression: he took himself a bit too seriously. My first impression was wrong, utterly and totally wrong. I came to appreciate that Gavin Appleby took his many causes quite seriously—but not himself. I came to appreciate him as a multifaceted state treasure. He became a treasured friend to me, as to countless others. He was unique.

The headline to the front-page obituary extolled his public service. It was appropriate, the writer noted, that Gavin spent part of his last day umpiring a softball game, calling the balls and strikes. "That's what everyone thought about him," said the chairman of the state Health and Human Services Finance Commission. "Put him in charge and let him make the tough calls." The obituary also pointed out that he was "a champion of the underdog, the poor people" . . . that he was "vigorous and principled" . . . that he "never blanched at uncomfortable issues." Gavin was a leader.

Gavin would remind us that he was first a doctor or, as he put it, a "country doctor." The term's nostalgia belies the deep and passionate meaning it held for him. When he entered private practice in St. George in 1953, the con-



J. GAVIN APPLEBY, M.D.
May 16, 1927-May 17, 1990

tinued viability of country doctors was questioned from many quarters. Gavin entered the vanguard of one of our times' most successful movements: the emergence of family medicine as a full-fledged, highly credible specialty.

After 17 years of practice, Gavin spent a year on the full-time faculty at MUSC, from which he wrote an article for *The Journal* entitled "Interest of freshman medical students in family practice." In retrospect, this article reflected both seminal ideas and a commitment to change and progress. He returned to St. George and became a driving force in the family practice movement on both a statewide and a national level. He focused his energies especially

on the development of effective residency programs. He was president of the South Carolina Academy of Family Physicians; he was the South Carolina Family Physician of the Year in 1981; he was a finalist in a contest for national recognition as Family Physician of the Year. All of this was fitting, for he stood tall among those whose efforts replaced the term "general practitioner" with a proud new one: "family physician."

Although Gavin joined the SCMA almost immediately after returning to St. George, it must have been through his involvement in the family practice movement that he saw the need to commit large blocks of his time to organized medicine. He served our association in many capacities: as chairman of the Constitution and ByLaws Committee; as parliamentarian, vice speaker, and speaker of the House of Delegates; as secretary; as president; and as alternate delegate and delegate to the American Medical Association. It was in these capacities that most of us knew him best. He was well-organized and he was a good team player.

Three aspects of his personality merit special comment.

First, he was playful. Gavin liked people, and it wasn't difficult to get past the sternness he sometimes conveyed on first impression. Visiting him in St. George, I was impressed by the range of his interests and activities: the vineyard, the old cars, the many organizations with which he was associated. To all of these he brought a sense of humor. He was an accomplished wine judge, and some of the jargon used by oenologists seems aptly descriptive of Gavin himself: sharp yet pleasant; distinctive yet well-balanced; full-bodied; and with a nice finish.

Second, he was extremely bright. His study reflected numerous interests outside of medicine, and he had many projects underway simultaneously. He was that rare commodity: the scholar who is also the man of action, ready and willing to make prompt and difficult decisions under pressure. Small wonder, then, that

the American Academy of Family Practice turned to him for advice especially in the area of education.

Finally, he was committed. One sensed that he had gone back to St. George because his roots there were so deep. His office was on Gavin Street; he was president of a society to preserve the old Appleby Church. He served St. George and Dorchester County in just about every way conceivable: as a long-time member and chairman of the school board; as president of the Jaycees and of many other organizations; as a leader in his church. Such involvement gave him great credibility when he spoke in state and national forums. He was a role model.

Over the years, Gavin gradually extended his commitment to the area of public health. He served as chairman of DHEC's advisory committee on health care; as editor of *Preventive Medicine Quarterly*; and as a member of the State Development Board, the Governor's Task Force on Health Care Extension, and the General Assembly's Medical Care Study Committee. In 1987, he left private practice to become medical director of the Health and Human Services Finance Commission. It is especially in this last capacity that his death is a great loss to all South Carolinians. Among his many contributions was the successful approval of a Medicaid waiver for AIDS patients in our state.

In his last editorial for *The South Carolina Family Physician*, Gavin quoted Shakespeare: "The old bard said it very well when he put down those words 'the moving hand writes and having writ moves on.'" Now, the words seem prophetic, for he died suddenly and unexpectedly a few hours after celebrating his 63rd birthday. We'll all miss him. Looking back, I can add one more rebuttal to the old question: "Why should anyone bother to become involved in organized medicine." The rebuttal is this: only by becoming involved can one get to know the truly unforgettable personages of our own times. Like Gavin.

—CSB



GCMMA

NEWSLETTER

JULY 1990

MEDICARE UPDATE

Self Referral and Physicians' Ownership of Clinical Laboratories

As of January 1, 1992, physicians who own, invest in, or have certain compensation arrangements with clinical laboratories will be prohibited from referring Medicare patients to those facilities for laboratory-testing services. These "self-referral" provisions were contained in the budget bill which was signed into law on December 19, 1989. The prohibition will also apply if a member of a physician's immediate family owns an interest in or has a compensation relationship with a laboratory to which the physician refers testing.

Exceptions to the self-referral ban include arrangements with laboratories located and managed entirely within a physician's office; in group medical practices of which the referring doctor is a member; in hospitals in which the referring physician is on the medical staff and his or her ownership interest is in the whole hospital rather than a part of it; in health maintenance organizations; in rural areas; and in hospitals in Puerto Rico. Also, physicians are allowed to invest in and refer patients to any clinical laboratory whose stock is publicly listed on a national exchange and which has assets exceeding \$100 million.

Stiff sanctions will be imposed for violation of the "self-referral" provisions of the legislation. If any person is paid for services performed as the result of a banned referral, that person must refund the amount collected or be subject to civil penalties of not more than \$15,000 for each service. A physician entering into an arrangement to ensure referrals (a "cross-referral" arrangement) that would be forbidden if they were made directly will be subject to civil penalties of not more than \$100,000 for each such arrangement and to exclusion from Medicare.

Effective October 1, 1990, every request for Medicare payment for services involving referral by a physician will have to include the name and provider number of that physician. If the information does not accompany assigned claims, payment will be denied. If the information does not accompany unassigned claims, the provider will be subject to civil penalties of up to \$2,000. If the failure to provide the information is knowing, willful and repeated, the entity may be excluded from the Medicare program

for up to five years.

You will receive specific instructions at a later date from Medicare. If you have questions or comments, please contact Barbara Whittaker at the SCMA.

MEDICAID UPDATE

Billing for Emergency Room Services

The 1990 edition of the Physician's Current Procedural Terminology (CPT) text has changed the way that non-hospital based physicians should bill for emergency room services. However, the State Health and Human Services Finance Commission requests that these changes not be implemented when billing for Medicaid recipients.

Physicians should continue to use the 90500-90580 range depending on the level of service provided, along with codes 99062, 99064 and 99065 when applicable.

This is a change from the proposed policy outlined in the April edition of the "SCMA Newsletter" in which physicians were instructed to bill according to CPT standards for emergency room visits beginning July 1, 1990. Billing by CPT standards would have resulted in decreased reimbursement to physicians and therefore will not be required.

Direct Medicaid questions to your provider representative at HHSFC.

Medicaid Appropriations Approved by SC General Assembly

When the SC General Assembly approved its final appropriations bill prior to adjournment on June 7, it provided an increase of \$16.3 million for the Medicaid Program. That figure includes a five percent inflation factor for provider rates, delayed until October 1, 1990.

AIDS UPDATE

Effective June 30, 1990, DHEC HIV/AIDS Surveillance is offering a toll-free number to all health care professionals in South Carolina who may diagnose or treat someone with HIV infection or AIDS. Please call 1-800-277-0873 Monday through Friday from 8:30 a.m. to 5:00 p.m. for information on the case definition for AIDS, or to report someone who is HIV positive or who has AIDS. Surveillance staff will be available to answer any questions. By SC statute, physicians, laboratories, health care institutions and others must report HIV infection and AIDS cases to DHEC.

AMA ACTIONS ON PROPOSED PHYSICIAN OFFICE LAB REGULATIONS

The American Medical Association has initiated the following

actions regarding the proposed laboratory regulations published in the May 21 Federal Register and described in last month's "SCMA Newsletter":

* A special AMA Ad Hoc Multi-Council Physician Advisory Committee, consisting of members of the AMA Councils on Scientific Affairs, Legislation and Medical Services, has been meeting over the last month to review the proposed regulations.

* A meeting of approximately 20 medical specialty societies was held June 20 to discuss the proposed regulations. At this meeting, each medical society voiced its concerns on various aspects of the regulations. A meeting on July 5 provided a further opportunity for discussion between medical specialty societies.

* In order to allow time for the broadest and most extensive possible input from physicians on these complex regulations, the AMA is seeking a 60-day extension of the comment period.

Call Barbara Whittaker at SCMA Headquarters if you have questions regarding these proposed regulations.

FROM THE OFFICE OF LEGAL AFFAIRS

Annual Certification Requirement Repealed

The requirement of the 1988 Business Corporations Act requiring PAs and PCs to file an annual certification statement with the State Board of Medical Examiners was repealed on May 7, 1990.

Infectious Waste Laws

Questions still exist about the status of SC law regarding infectious waste. For physicians who generate less than 50 pounds of such waste per month, the following rules apply:

1. Disposal of sharps: Sharps are to be disposed of in "rigid puncture-proof containers." Once the sharps are sealed in this type container, the container may be disposed of as any other solid waste, that is, thrown into the garbage can. The law does not require the use of any special container, or of any special disposal mechanism, once the sharps are contained in a rigid puncture-proof container.

2. Blood and other body fluids: These substances may be poured down the drain under present law.

3. Soiled linens, paper items, towels, etc.: These items may be thrown away as any other solid waste. It is best that they be bagged, but bags of any particular color are not required.

Physicians should note that OSHA regulations have an impact upon the handling and disposal of infectious waste.

The universal precautions promulgated by the CDC should be followed to protect health care workers in your office. A needle should never be recapped or broken by hand or a mechanical device prior to disposal. Simply dispose of it in a proper container. Blood soaked linens and paper products should be bagged securely in a manner to insure leakage will not occur.

These are general guidelines and do not represent all of the OSHA requirements. Copies of the universal precautions are available from Kim Fox or Joy Drennen at SCMA or you may direct specific questions to Stephen Williams in the SCMA Office of Legal Affairs.

The Cruzan Case

On June 25, 1990, the US Supreme Court rendered a decision in this controversial case.

In a 5-4 decision, the court ruled that states may intervene to keep a person alive by artificial means where the patient has not made a sufficient advance directive that he/she did not want to be kept alive by artificial means, even though the family overwhelmingly supports the withdrawal of life support equipment. The court left the matter of deciding the proper methods of determining what constitutes a sufficient advance directive to the individual states.

At issue in the Cruzan case was whether a Missouri law requiring "clear and convincing evidence" of a person's desire not to be kept alive by artificial means was constitutional in light of what many had argued as a "constitutional" right to die that could not be abridged by state evidentiary rules.

Applying the same sort of analysis seen in the recent Webster abortion case, the Supreme Court held the federal constitution does not prohibit a state from choosing which standard of proof will be required in determining the patient's intent.

This decision, squarely against the prevailing trend in the law, raises many more questions than it answers. On its surface, the case is easily written off as a statement on the breadth of the federal constitution in matters dealing with state evidence law. However, it may be nightmarish for health care providers to deal with 50 different laws concerning terminally ill patients who have given some intent of their desire to avoid artificial life support. Unquestionably, the court has opened the door for even more intervention by the government in the physician-patient relationship.

Justice O'Connor, in a separate concurring opinion, sought to emphasize that the decision was a narrow one limited to the

single question of Missouri law and indicated she may be open on the issue of whether the federal constitution supports and would protect someone's "right" to make an advance directive such as a living will. Justice Scalia, on the other hand, referred to withdrawing life support as assisted suicide.

In South Carolina, the decision makes the durable power of attorney and living wills more important than ever.

Labeling of Samples

On April 3, 1990, Governor Campbell signed into law a bill drafted by SCMA which modified DHEC's requirements for labeling drug samples.

Labeling is not required for a sample that does not require a federal or state controlled substances license to dispense, is dispensed by the physician at no charge to the patient, is contained in the manufacturer's original package, and not more than 120 dosage units or eight fluid ounces of the drug is dispensed.

ALL SAMPLES OF CONTROLLED SUBSTANCES MUST BE PROPERLY LABELED!

SCMA PHYSICIANS APPOINTED TO PRO BOARD

Roger Gaddy, MD, of Winnsboro, Robert L. Galphin, MD, of Columbia, and William Carter, MD, of Charleston have been appointed to three new positions on the PRO Board. These physicians were nominated by the SCMA Board of Trustees.

SOUTH CAROLINA RESIDENTS HONORED

The following SCMA members were recognized by the AMA/Burroughs Wellcome Company Leadership Program for Resident Physicians at a reception and ceremony on June 22, 1990: Mark George, MD, from MUSC; and Dan W. Robinson, MD, and Enoch G. Ulmer, MD, from Self Memorial.

These resident physicians were selected for their commitment to community service and their outstanding leadership skills. Out of 50 possible awards, South Carolina residents received four.

FIFTH ANNUAL PRACTICE OPPORTUNITIES FAIR

The SC Area Health Education Consortium (SC AHEC) Center for Recruitment, Retention and Placement will sponsor its fifth Annual Practice Opportunities Fair on August 10-11 at the Embassy Suites Hotel in Columbia. The fair is designed to help residents identify and evaluate practice opportunities throughout the state by visiting with physicians looking for partners and representatives of hospitals and communities to discuss locations, cost, assistance and other considerations associated with establishing a practice in South Carolina.

For additional information and to register for the fair, call Mary Chesshire or Becky Seignious at 792-4431 in Charleston.

COLLECTIONS SEMINAR

The SCMA is considering holding a one-day collections seminar for office manager or collections personnel if there is enough interest. The cost for lunch and seminar materials would be \$100-\$125.

If you or your staff would be interested in attending such a seminar, please call Julia Brennan at the SCMA in Columbia.

AMA EXECUTIVE VICE PRESIDENT SELECTED

On June 19, the AMA Board of Trustees announced the selection of James S. Todd, MD, as executive vice president designate (pending agreement on final terms). Dr. Todd was named acting executive vice president in February, 1990, after having served as senior deputy executive vice president since 1985. A general surgeon from Ridgewood, NJ, Dr. Todd was a member of the AMA Board of Trustees from 1980 to 1984 and served as a commissioner to the Joint Commission on Accreditation of Hospitals from 1982 to 1985.

UPCOMING CONFERENCES

The SCMA, SC Hospital Association, SC Nurses Association, SLED, the Governor's Office and the SC Criminal Victims Compensation Fund are sponsoring a Criminal Sexual Assault seminar on Tuesday, July 31, 1990 at the Embassy Suites Hotel in Columbia. For information and registration details, contact Doris Clevenger at SCHA, 796-3080 in Columbia.

Greenville Technical College, the March of Dimes South Carolina Chapter, the Greenville Hospital System and several other health care agencies are sponsoring the Third Annual Conference on Black Health Issues, August 5-7, 1990 at the Hyatt Regency Hotel in Greenville, SC. The focus will be a call to action, an attempt to share successful intervention strategies with health care personnel, state officials, educators, community leaders and legislative representatives. Registration fee for the conference is \$75.00. To register, call 250-8158 in Greenville with your MasterCard or VISA number, or write Greenville Technical College, PO Box 5616, Greenville 29606-5616, Attention: Holly Benedict.

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Contributions welcomed.
Melanie Kohn, Editor
Joy Drennen, Assistant Editor
798-6207, in Columbia
1-800-327-1021, outside Columbia

GUIDELINES FOR SYMPOSIUM ISSUES

The Editorial Board of *The Journal* welcomes suggestions and proposals for special symposium issues devoted to one or another topic or specialty. Through experience, we have come to appreciate that such issues should fulfill several desiderata. They should meet the needs of our readership—ideally becoming keepsakes for many of our association's members. They should foster a sense of good will and cooperation among the contributors, who should be drawn from around the state—not just from one institution or locality. And they should be consistent with the ideals and goals of the South Carolina Medical Association. A recently-developed and approved set of guidelines is published in full in this issue. Again: suggestions for topics are welcome!

—CSB

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Letter to the Editor

To the Editor:

I would like to make one other point concerning the issue of testing for inhalant allergy that has recently been the subject of articles and letters to the Editor in *The Journal*.

First of all, I appreciate the eloquent letter by Dr. Banov. I am disappointed that his points substantiated by the literature were not taken seriously by the authors of the original article.

However, another issue is the matter of *in vitro* testing for allergy. Whether the RAST or monoclonal antibody test, both are flawed by serious scientific problems. The tests are technically difficult, particularly the RAST. Even nationally recognized laboratories have admitted at scientific meetings that their technicians have difficulty reproducing results from day to day using different batches of antigen solutions, etc.

But the more important point is the nature of the IgE antibody itself. It is a tissue-bound antibody and is not a blood-borne antibody (thus the need for micro and radioimmune assay techniques in the first place). Of major importance is that its equilibrium coefficient between blood and tissue is markedly on the tissue side so that the half-life in serum is only a matter of days for IgE protein, where the half-life in the skin and tissues is several months. Therefore, testing for a specific seasonal pollen antigen/antibody might well be accurate with the *in vitro* test during that season, but out of the season would be inaccurate. Given the longer half-life of IgE in the skin, an out of season skin test is still usually reliable. Ironically, the scales for interpretation of *in vitro* test results are created using the skin tests as the "gold" standard.

The other point to be made in the debate between *in vitro* and *in vivo* testing is that much

of the benefit of *in vitro* testing is to the economics of the physician administering or drawing the blood for the test (and the laboratory that runs the test). Properly performed skin tests described by Dr. Banov are much more effective and significantly cheaper than *in vitro* testing.

In vitro testing for inhalant allergy has to be used with great care. There are serious scientific problems with the reproducibility and the accuracy of the test itself. The major difficulty with *in vitro* testing is that if done in the "wrong time of the year" the results may not be accurate so that there may be false negative results (*in vitro* allergy tests are specific but are not sensitive).

These are serious issues that need to be acknowledged not just because of some conflict between ENT physicians and allergists. Now many family practice physicians and pediatricians and other primary care physicians are starting to do *in vitro* testing mainly from the pressure of advertisements both in their journals and in the national media. These are issues that the public needs to be more aware of, that we as physicians need to be more aware of, and also the insurance companies need to be more aware of, particularly when there are such scientific problems with the *in vitro* test.

Thank you for your kind attention to these issues.

STEPHEN A. IMBEAU, M.D.
514-G South Dargan Street
P.O. Box 1938
Florence, SC 29503

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GUIDELINES FOR GUEST EDITORS OF SYMPOSIUM ISSUES *THE JOURNAL OF THE SOUTH CAROLINA MEDICAL ASSOCIATION*

CHARLES S. BRYAN, M.D., EDITOR

BACKGROUND

Over the years, special issues have been a valued feature of *The Journal*. Several have attracted national attention and even won awards. Members of the South Carolina Medical Association continue to express their desire for special issues relevant to their practices.

Through experience, we have learned something about (1) what works best; (2) what our readers want; and (3) what pitfalls to avoid. The purpose of these guidelines is to share these perspectives with prospective guest editors of symposium issues.

CRITERIA FOR EVALUATION

Proposals for special issues are circulated to members of the Editorial Board for final decision. The following considerations should be addressed:

1. Is the topic of relevance or general interest to the majority of SCMA members?

High priority is assigned to topics relevant to the practices of primary care physicians. Topics of interest primarily to specialists or subspecialists are discouraged. A number of symposium issues written *by* specialists *for* primary care physicians have been well-received. On an individual basis, topics of a more specialized nature are also considered especially when these pertain uniquely to South Carolinians or reflect events taking place in South Carolina.

2. Is the topic timely?

Planning for symposium issues usually begins a full year prior to publication. Publication of similar symposium issues in national or regional journals does not preclude consideration for *The Journal of the South Carolina Medical Association*—provided, of course, that there is no overlap in authorship. Highest priority is assigned to topics of ongoing interest to primary care physicians or of broad general interest. Parenthetically, it has been *The Journal's* policy for many years to decline all proposals for regular or “serial” publications. We

have permitted and even encouraged “update” symposia spaced several years apart, but we have declined suggestions that any topic be treated on an annual basis.

3. Does the issue promise to be a truly statewide effort?

As a general rule, we have found the best working model to be a cooperative effort between (a) faculty members at both of our state's medical schools, (b) private practitioners, and/or (c) physicians or health authorities at state agencies—notably DHEC. A symposium issue should decidedly *not* be primarily the work of one or another author, clinic, institution, or unit.

4. Does the issue hold the potential to promote cooperation and good will among South Carolina physicians?

As a corollary to the previously desideratum, we feel strongly that the effort should promote such cooperation, reflecting a truly collaborative effort. When issues deal with one or another specialty or subspecialty, a “call for papers” issued to all potential authors creates a sense of opportunity for participation. In most instances, this is easily accomplished through existing specialty or subspecialty organizations. Prospective guest editors should not overlook senior physicians who have made large contributions to the area over the years. Historical perspectives or guest editorials by such physicians add both interest and credibility to the effort.

SPACE LIMITATIONS

The Journal operates on a restricted budget. As is the case for most state medical journals, printing costs exceed advertising revenues. Therefore, we can ordinarily accommodate no more than 40 pages of typed, double-spaced pages of manuscript per issue, with no more than 16 figures and/or tables. Guest editors of symposium issues must adhere to these guidelines unless additional funding is available.

SPECIAL FUNDING

Additional funding—as might be obtained from pharmaceutical firms, manufacturers, or grants—enables us to publish longer, more elaborate issues. On a number of occasions, such funding has allowed the publication of rather comprehensive treatises on one or another topics, which have been of keepsake value to our state's practitioners. Hence, we strongly encourage guest editors to consider this possibility. Proposals should address whether outside funding will be elicited.

GUEST EDITORSHIP

Each symposium issue should have one or more guest editors. In many situations, it is appropriate to have two or more guest editors, drawn from different sectors—for example from either or both of our medical schools and/or from among private practitioners.

Guest editors should (1) supervise planning of the issue; (2) correspond with potential authors and then with confirmed authors; (3) assure that manuscripts are received in a timely fashion; (4) make recommendations for revisions, when necessary; and (5) perform appropriate copy editing. Guest editors should author or co-author no more than one manuscript in the symposium issue. Exceptions to this rule should be cleared by the Editorial Board. Guest editors should inform the editor and managing editor periodically of the issue's progress. The issue should be delivered to the editorial office of *The Journal* no later than the first day of the month prior to scheduled publication. Earlier delivery is encouraged.

SUBMISSION OF PROPOSALS

Initial inquiries can be addressed to the editor for suggestions with regard to timeliness and appropriateness. Formal submissions should consist of (1) a brief justification of the issue (why the topic is important); (2) a proposed list of articles; (3) a proposed list of potential authors *or* a statement about what persons or groups of persons will be approached with regard to potential authorship; (4) some mention of how the issue will reflect a truly statewide effort (or, if not, why); and (5) a statement whether outside funding will be solicited.

PROCEDURE FOR SUBMISSION AND APPROVAL

Proposals and all other correspondence should be addressed to The Editor, *Journal of the South Carolina Medical Association*, P. O. Box 11188, Columbia, SC 29211.

Proposals are sent to members of the Editorial Board for approval. Ordinarily, a decision will be rendered within six weeks.

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On the Cover:

JOHN LINNAEUS EDWARD WHITRIDGE SHECUT 1770-1836

Dr. Shecut was born in Beaufort on December 4, 1770, but moved at an early age to Charleston where he studied medicine under a friend of the family, Dr. David Ramsay. He continued his study under Dr. Benjamin Rush at the University of Pennsylvania but "misfortunes prevented him from graduating." He returned to Charleston and practiced medicine until his death in 1836.

Dr. Shecut was a man of many interests. He was one of the pioneers in the therapeutic use of electricity, though his "cures" were not always above criticism. He founded in 1813 the Antiquarian Society which soon became the Literary and Philosophical Society of South Carolina and which played an important part in the founding of the Charleston Museum. Dr. Shecut opened the first cotton mill in South Carolina and was so enthusiastic about the project that he named one of his sons Abraham Homespun Shecut. He wrote two short novels on early Indians, and undertook a revision of the Episcopal Book of Common Prayer, possibly to use as a service book for the short-lived congregation of "Trinitarian Universalists" which he founded.

Our cover this month is an illustration from perhaps his most famous work, *Flora Carolinensis*, which was published in 1806 and has been called the "most extensive work on botany of the state . . . up to that time." Although the title page states volume 1, no further volumes were published. The illustration seems to be a compilation showing characteristics of a wide variety of plants.



John Linnaeus Edward Whitridge Shecut.

Dr. Shecut died on June 1, 1836, after a brief illness. One of the many tributes to him begins: "No short sketch of so distinguished and able a scientist could do him justice, for his unselfishness, his usefulness, commenced early in life, and only ended with it."

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CORONARY ARTERY BYPASS SURGERY IN THE ELDERLY*

A. BRIAN McINTYRE, M.D.**
JAMES F. BALLENGER, M.D.
ANGELA T. KING, R.N.

Direct myocardial revascularization has over the last 20 years become a standard, reliable form of therapy for ischemic heart disease. As the average age of our population increases, the need to critically evaluate and reevaluate the application of invasive and costly forms of therapy becomes increasingly important. Recent interest in assessing the impact of the coronary bypass grafting operation (CABG) on ischemic heart disease in the elderly has prompted us to both evaluate our patients and to review the experience of others.

While risk of CABG in elderly patients (typically described as older than 70 years) ranges markedly from 1.6%¹ in small select series to as high as 10.5%³ in others, typical surgical mortality is substantially increased even over patients in their sixth decade of life. Though gross operative mortality figures are important, certainly the impact of CABG is more adequately reflected by data on relief of symptoms and long term survival. In addition, certain morbid parameters (e.g., neurologic events) have a major impact on the perceived outcome.

Refinements in both surgical techniques and anesthetic management plus a precise estimation of likely benefit to the elderly patient have

made the recommendation for direct surgical intervention in patients 70 years or older a more acceptable and utilized form of therapy in recent years. In an attempt to clarify this issue on a personal basis, we have followed a group of 250 patients having elective or urgent CABG at the Richland Memorial Hospital. These patients were at least 70 years of age at the time of surgery. Our results, compared to both major single institution reviews and multi-institutional trials,¹⁻¹⁰ are favorable with an operative mortality of 3.6% compared with typical mortalities of five to nine percent.

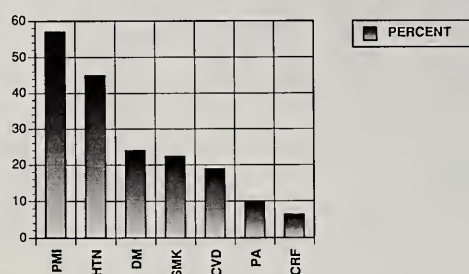
PATIENTS AND METHODS

Selection of Patients

Between November 1984 and October 1989, 250 patients between the ages of 70 and 86 underwent aortocoronary bypass grafting under elective or urgent circumstances. Those patients undergoing additional valve surgery were excluded. A small number of patients underwent LV aneurysmectomy or carotid endarterectomy in addition to CABG. Of the entire group, 152 (60%) patients were male and 98 patients were female. A variety of other functional descriptors were evaluated including the number of grafts placed, estimation of left ventricular function and presence of a variety of other coexisting illnesses such as previous myocardial infarction, hypertension, diabetes and renal failure (Figure 1).

* From the Heart Center at Richland Memorial Hospital, Columbia, S. C.

** Address correspondence to Dr. McIntyre at One Richland Medical Park, Suite 340, Columbia, S. C. 29203.

Preoperative Characteristics of CABG Patients
70 Years of Age and Older

PMI = Previous MI, HTN = Hypertension, DM = Diabetes Mellitus, SMK = Smoker, CVD = Cerebrovascular disease, PA = Previous Angioplasty, CRF = Chronic failure.

Figure 1

Preoperative Characteristics (Table 1)

Two hundred and fifty patients with an average age of 74.2 were operated over a five-year period. Twenty-two patients were 80 years of age or older and 60% (152) were male. Preoperatively 116 (48%) were on treatment for hypertension. Fifteen (6.4%) were noted to have moderate to severe chronic renal failure, and 60 (24%) patients were diabetics requiring medication. Evidence of preexisting cerebrovascular disease was present in 47 patients (19%). One hundred forty-two (57%) patients had had previous myocardial infarctions. Mean ejection fraction was 49.4% with 28 (11.9%) patients having an ejection fraction of 30% or less. Severity of symptoms was evident as 197 patients had either Class III or Class IV (Canadian Cardiovascular Society) angina or intractable cardiac failure secondary to ischemic dysfunction. Twenty-five patients (10%) had had a previous PTCA. Left main obstruction was present in 47 patients (18.8%).

Operative Data

Anesthetic management was standardized with use of invasive monitoring including pulmonary artery catheters with use of high dose morphine analogs to maintain anesthesia. Standard perfusion techniques with moderate hypothermia (28° to 30° C) were used. Myocardial protection was standard crystalloid hyperkalemic cardioplegic solution. Internal mammary grafting was used fairly extensively with 97 (40%) patients receiving one IMA and three patients receiving two IMA grafts. The remainder of the bypass grafts were saphenous veins except for one cephalic vein. Average

TABLE 1

Preoperative Data on CABG Patients
70 Years of Age or Older

Parameter	n	(%)
Age (mean)	74.2 (Range 70-86)	
Male Sex	150	(60.0%)
NYHA Class		
I-II	36	(14.4%)
III-IV	214	(85.6%)
Ejection Fraction (mean)	49.4	
Ejection Fraction less than 30%	28	(11.9%)
Left Main Obstruction	47	(18.8%)
Number of Grafts (mean per pt.)	3.7	

number of grafts per patient was 3.7 with only 22 patients receiving only two grafts or less.

Operative Outcome (Table 2)

Surgical mortality was assayed at discharge or 30 days following the procedure. There were nine deaths for a mortality of 3.6%. Mode of death was intractable cardiac failure or devastating CNS event in almost all cases. Surviving or discharged patients were seen at one month or greater following the procedure and none had recurrence of angina short term. Eight patients required intra-aortic balloon pumping postoperatively with 17 patients requiring high dose inotropic support. Eight patients had postoperative CVA (3.2%). Mediastinitis and pulmonary embolus were seen in one patient each, while postoperative depression was seen fairly frequently (6%). Postoperative stay was prolonged in this age group at 12 days. Postoperative arrhythmias were seen and felt to be very similar to those in our younger patients.

TABLE 2

Postoperative Data on CABG Patients
70 Years of Age or Older

Parameter	n	(%)
Balloon pump	8	3.2%
High dose inotrope	17	6.8%
Neurologic deficit, postop	8	3.2%
Depression	15	6.0%
Mediastinitis	1	0.4%
Pulmonary embolus	1	0.4%
Operative mortality	9	3.6%
Hospital stay (mean)	12 days	

DISCUSSION

As the mean age of our population increases, due to the inherent demographic changes of improved longevity and static birth rates, the necessity to continually reevaluate the impact and the applicability of expensive and highly technical types of therapy for the elderly population becomes increasingly important. With the substantial prevalence of ischemic heart disease in the elderly, and the proliferation of various treatment modalities, the idea of recommending a formidable and invasive therapy to the elderly patient with particular regard to the patient's expected longevity must be selectively and carefully considered. With increasing age the propensity toward intercurrent illnesses such as hypertension, renal dysfunction, central nervous system disability and malnutrition becomes marked. A key to this discussion is the idea that each patient must be critically and selectively evaluated both to the patient's physiologic age, his anticipated rehabilitative potential and the anticipated support structure that this patient might have after discharge.

The idea of discriminating chronologic age from physiologic age in dealing with the elderly has been a recurring theme and, indeed, many clinicians have recommended cardiac surgical procedures to their patients in their seventh, eighth, and even ninth decade of life even though there appears to be a linear increase with age in both the operative mortality and morbidity in these patients. In small, carefully selected series there have been impressive surgical results in patients with advanced age and highly reputable institutions have concluded

that the overall results for patients in their fifth and sixth decade are little different from those in more advanced years and concluded cardiac surgery should be offered for the usual indications in the elderly patient.¹⁰ If one substantially reviews the available collected series this recommendation cannot be uniformly supported. In our collected series (Table 3) of 3,463 patients reported in the literature the overall mortality is 6.5%. Though our personal experience is significantly better than this, we feel that our results are readily reproducible even in light of the fact that many of our patients have had significant advanced systemic disease and other risk factors including highly diseased coronary arterial tree and poor left ventricular function. Needless to say, the highly symptomatic patient with favorable anatomy and reasonable surgical risk should gain great benefit from intervention.

In assaying the surgical results, overall mortality rate maintains a bellwether position, but overall significant postoperative morbidity in the elderly population cannot be overlooked. Though while it is our impression that complication rates such as arrhythmias, mild pulmonary problems and wound and incisional problems tend to be very similar to those seen in the younger age patient population, one area of major concern seems to be that of perioperative cerebrovascular accidents. In most large series inclusive of all age groups, CNS morbidity associated with the CABG operation is one to two percent. In our review of the literature, CNS morbidity ranges from 2.5 to roughly 8.6% and this is of concern even when one takes into consideration that a significant

TABLE 3
Survey of CABG Patients' Mortality
70 Years of Age or Older

<i>Author/Institution</i>	<i>Year</i>	<i>N</i>	<i>Mortality</i>	<i>Stroke</i>
Knapp (Emory)	1981	121	1.6% (2)	2.5%
Gersh (CASS, multi-institutional)	1983	283	7.1% (20)	—
Faro (Rush)	1983	105	10.5% (11)	8.6%
Elayada (Houston)	1984	1,117	5.9% (66)	—
Dorros (Milwaukee)	1987	674	7.4% (50)	4.2%
Horneffer (Hopkins)	1987	228	9.3% (21)	7.5%
Acinapura (New York)	1988	685	7.0% (48)	4.0%
McIntyre (Richland Memorial Hospital)	1990	250	3.6% (9)	3.2%
Total		3,463	6.5% (227)	—

percentage (19%) had some evidence of pre-existing cerebrovascular disease. Though most focal CNS problems following CABG are embolic in etiology, there is some recent evidence that left ventricular hypertrophy is associated with increased postoperative CNS morbidity and based on this we have tended to elevate the perfusion pressure while on cardiopulmonary bypass to more closely mimic a chronically hypertensive state. Whether or not this will positively impact our operative outcome remains to be seen. Psychomotor agitation and temporary diminution of cognitive function and depression are seen and can be a significant source of concern to both the clinician and family.¹¹ These types of problems tend to resolve very quickly upon discharge of the patient to a more normal situation.

Short and long term survival following coronary bypass surgery in the seventh decade and beyond are noted to be quite acceptable. Carefully evaluated large series of patients have noted nearly 81% five-year survival following the CABG procedure in patients older than 70 years of age and, indeed, in a group of patients operated between the ages of 75 and 84, the five-year survival has been 73%.^{4, 10} Interestingly, the ten-year survival ranges from 44% to 65% in these patients. Shorter term survival of approximately 95% at 36 months has been documented in one of the earlier series.¹ Our own series is yet unevaluable in terms of long term survival but our initial impression of short term survival is quite good. Other authors have concluded that there was little difference in the completeness of rehabilitation or in the time needed for full recovery when elderly CABG patients were compared to those of a younger age group.⁶

Clearly the recommendation for surgery needs to be based on protection of the highly symptomatic patient from further ischemic events or prophylactic operation for grave anatomy. Though we approach the elderly pa-

tient with some trepidation, our feeling is that age per se is not a contraindication to CABG and we feel our results are particularly gratifying in light of available published series. We suspect that in most surgical centers an operative mortality of three to five percent is obtainable for this elderly population.

Though the postoperative stay as indicated (Table 2) is somewhat prolonged (12 days), we continue to support CABG as a cost effective procedure for advanced multivessel coronary obstructive disease in the elderly patient. We particularly feel this is a cogent point to be made in light of the fact that the short and long term survival in this older group of patients following CABG has been documented to be quite good.

SUMMARY

In order to place the issue of CABG surgery in the elderly in a personal perspective, we have reviewed our series of 250 consecutive patients 70 years or greater in age at the time of surgery and have noted a very acceptable (3.6%) operative mortality. Good short and long term survival has been documented. A modest but important elevation of postoperative CNS morbidity has been documented and remains of concern. We have continued to offer CABG to those patients with acceptable risks who have either intractable angina, intractable ischemic heart failure and multivessel disease. Left main obstruction of a significant degree or those with threatening three vessel anatomy in association with a sentinel ischemic event are candidates for the CABG procedure. Substantial preoperative evaluation to include the family support substrate must be an important part of the decision process as well as open communication with concerned family members. We feel that the improved life style and enhanced survival justifies CABG in those elderly patients identified with severe coronary artery disease. □

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INTERFERON AS TREATMENT FOR VIRAL HEPATITIS: A PROGRESS REPORT*

WILLIAM M. LEE, M.D.**

Viral hepatitis is a frequent cause of acute and chronic illness. It is the most common cause of jaundice world-wide. Chronic viral hepatitis is the number one cause of cirrhosis and cancer throughout the world as well. Prior to 1980, little in the way of treatment was available for any form of liver disease, but all that is changing. While the 1980s will be remembered as the decade when liver transplantation became available for the treatment of end-stage liver disease, the 1990s will be remembered as the decade in which *medical* treatment for hepatitis, gallstones and other liver conditions first came into use. Foremost in the group of new medical therapies for hepatitis is alpha-interferon. Five hepatitis viruses, labelled A through E, are now recognized. A and E are both enterically transmitted RNA viruses for which there does not seem to be a chronic form, and thus treatment is not necessary or appropriate. The subject of this review will be use of alpha-interferon for the treatment of hepatitis B, C and D. I will begin each section with a brief review of our current state of knowledge for each of these parenterally-transmitted hepatitides, give some background concerning interferon, and then review the clinical trials and response rates observed to date.

HEPATITIS B VIRUS: BACKGROUND

Hepatitis B affects more than 230 million

individuals worldwide, most of whom are chronically infected. This DNA virus represents a major international health problem. While hepatitis B virus (HBV) originally was a frequent cause of post-transfusion hepatitis, the discovery of the Australia antigen led to the use of blood bank screening for this virus surface antigen, now termed HBsAg, and this effectively excluded infected units. It is important to understand that HBV is not a cytopathic virus, that is, it does not cause liver damage directly; hepatocyte necrosis results from the host's immune attack on virus-infected cells. Thus, immuno-suppressed individuals are those most likely to become chronic carriers of HBV, and the withdrawal of immunosuppression in certain individuals has resulted in severe, even fatal exacerbations of hepatocyte injury. Having said this, it is unclear why approximately five percent of otherwise normal individuals, usually males, fail to completely respond to acute HBV infection with clearance of the virus. These individuals go on to chronic infection, and make up a large segment of the chronic hepatitis B group, at least in the United States. In developing countries, vertical transmission from mother to newborn at the time of delivery is the more common form of spread of hepatitis B. The infant frequently becomes a carrier, presumably as a result of the immaturity of his or her immune system; the host fails to recognize the virus as a foreign invader.

The sequence of events in the immune response to hepatitis B is not well understood. Once the host liver cells are infected and viral DNA is present in the nucleus, viral particles are produced and the virus is replicated unimpeded until such time as the presence of foreign protein (HBsAg) in the circulation initiates the immune response.¹ Hepatitis B core antigen is displayed on the surface of the liver cells and may be the more important target antigen for the subsequent immune attack by cytotoxic T-cells. Recognition of the infected cells involves

* From the Gastroenterology Division, Medical University of South Carolina, Charleston, S. C. 29425. This review was supported by The Houghton Foundation, Corning, N. Y., and by the Harwood Institute, Medical University of South Carolina, Charleston. The Gastroenterology Division at MUSC has been selected as one of the sites for the forthcoming trial conducted by Roche Laboratories of the use of alpha-interferon in hepatitis C; the principal investigator is Dr. Robert T. Foust and the study coordinator is Ann Jonason. Dr. Lee disclaims any stock ownership or other financial interest in Hoffmann-LaRoche, Inc.

** Current address: Liver Unit, University of Texas Southwestern Medical Center, 5323 Harry Hines Blvd., Dallas, TX 75235.

the display on the cell surface of class II major histocompatibility complex (MHC) antigens, and this display is under interferon control.² It has been postulated that individuals who become chronic hepatitis B carriers have an inadequate interferon response as the cause of their failure to clear virus. This provides a nice rationale for the use of interferon in these patients—clear up the virus by “improving” the interferon concentrations. Whether this is the whole story or whether anti-viral effects of interferon are more important remains to be seen.

An additional important point in our understanding of the hepatitis B virus life cycle is the recognition since the late 1970s that at least two distinct phases of HBV infection occur. Hoofnagle has drawn attention to this phenomenon. In all patients, regardless of their eventual outcome, there is an early phase called the replicative phase in which the virus genome exists free in the nucleus (non-integrated) and whole virions are made. In the replicative phase, HBV DNA is present in serum, HBeAg is positive and liver damage tends to be more active. In the later phase, called the integrative phase, a portion of the complete HBV genome becomes intercalated in the host chromosomes. As a result, whole virions are no longer made, HBV DNA is gone, and HBeAg is replaced by anti-HBe. Liver disease is more quiescent in this phase and transaminases are normal or slightly elevated. Although we would all like to have patients clear HBsAg, the more attainable goal is to clear HBV DNA, that is, evolve from the replicative to the integrative stage and this is usually signalled by conversion to anti-HBe. Under ordinary circumstances, without any treatment, the spontaneous conversion to anti-HBe occurs at about three to seven percent per year and this is sometimes associated with a flare in disease activity, although transaminases go on to improve thereafter.

TREATMENT OF HEPATITIS B

Merigan at Stanford was the first to use interferon in the treatment of hepatitis B in the mid-70s. These early studies quite dramatically showed that HBV DNA could be cleared from the circulation, and improvement in transaminases could be expected in a higher

number than would be expected to clear by chance alone.³ It was observed serendipitously that patients who underwent steroid taper prior to beginning interferon also had HBV DNA clearance and a flare of their disease, and this led to further trials of short courses of prednisone for the purpose of providing an immune “boost.” Twenty-five to 50 percent response rates were observed with interferon by itself, in HBV DNA-positive individuals only, and slightly better results were seen with steroid withdrawal in uncontrolled trials. The early interferons were obtained from buffy coat preparations and were in very limited supply. However, with the use of recombinant DNA technology, it has become possible to manufacture alpha-interferons on a much larger scale. It should be stated that the exact mechanism of action of alpha-interferon is unclear. The interferons in general are thought to be lymphokines which possess wide anti-viral activity, and probably decrease viral replication on an intra-cellular level. Whether they have other important immunostimulatory effects remains to be seen.

Perillo at Washington University in St. Louis has conducted the most careful trials using interferon (IFN) or prednisone taper in treating HBV DNA-positive chronic hepatitis B.⁴ In the most recent multi-center trial, 163 HBeAg positive patients who were negative for HIV and HDV were subjected to either steroid withdrawal plus interferon at 5 mU/d for 16 weeks, or placebo withdrawal plus interferon at 5 mU/d, or placebo plus interferon at 1 mU/17x189d for 16 weeks or no treatment.⁵ Response rates were 38% for prednisone/5 mU IFN, 33% for placebo/5mU IFN, 17% for placebo/IFN 1mU, and seven percent in the no treatment group. Only 10% lost HBsAg. Factors predicting a good response included high initial transaminases, low initial DNA titer, female sex, short duration of known illness, and non-Oriental race. Heterosexuals did better as a group than did homosexuals. No patients were treated who showed evidence of cirrhotic decompensation prior to entering the study, and a good response was consistently associated with a flare in disease activity in the first four to six weeks. Histology appeared to improve in those who responded. It was disappointing that the combination of prednisone

withdrawal and interferon did not appear to be statistically of greater benefit than interferon alone. Since each has shown quite comparable efficacy, it was hoped that the combination would be twice as good.

Unfortunately, one cannot predict with certainty whether a patient will respond in any of the categories outlined above, since there is considerable overlap and only trends towards an increased or decreased response for these various demographic or disease features. If interferon lack is the problem in acute hepatitis B, it might stand to reason that interferon supplementation during acute hepatitis might be of help. So far, a small trial of the use of interferon failed to show an advantage in acute hepatitis B. It may be that the number of cases who would be likely to have a bad response was just too small to gain statistical benefit in treating a disease where the normal outcome is a successful resolution.

With regard to *hepatitis D*, this is an entirely different virus, and one which co-travels exclusively with hepatitis B. It appears to be cytopathic and thus, it would seem likely that interferon would act in a different fashion entirely. A small trial of the use of interferon for hepatitis D has been unsuccessful, but we may hear from this quarter again at some point, since the disease is, if anything, more severe than hepatitis B or C.

NANB HEPATITIS/HEPATITIS C: BACKGROUND

Once blood screening cleared hepatitis B from the blood banks, it became clear that a second more subtle virus was responsible for many cases of post-transfusion hepatitis, and was probably important as a cause of parenterally-related disease. The typical patient with NANB hepatitis (also called non-A, non-B hepatitis) develops mild illness, often asymptomatic AST elevation, after transfusions for elective or emergent surgery. It has been estimated that 10% of those receiving two or more units develop acute NANB hepatitis and half of these have chronic enzyme elevations with about one in five developing cirrhosis following years of chronic illness. Clinically, the disease is signalled by persistent transaminase elevations in the patient with known parenteral exposure. Six months is usually given as

the arbitrary definition of chronic disease. Many attempts over the past 15 years to identify the putative NANB virus all failed, due in large part to the tiny quantity of virus that is present in the circulation. With NANB, there is estimated to be 10^1 or 10^2 infectious units/ml vs. 10^8 to 10^{10} infectious units in the case of hepatitis B.

In the past year, Houghton and his colleagues from the Chiron Corporation in California reported the successful identification and cloning of the main NANB virus which is now referred to as hepatitis C.⁶ It is a small RNA virus resembling the yellow fever virus but it will probably be classified in a unique place in the viral nomenclature. Antibody testing using a protein synthesized by recombinant technology identifies most but not all hepatitis C carriers. More than 80% of patients with chronic transfusion-related hepatitis will be positive using the current test.⁷ About 50% of those with spontaneous NANB hepatitis are also found to be positive. Antibodies are present in only 20% of those in the first month of hepatitis C, with the frequency increasing steadily over the first year. Future tests will undoubtedly be somewhat more sensitive, although it is also possible that another virus accounts for the discrepancies in the percentages listed above. The hepatitis C test is now approved and available in blood banks and hospital laboratories.

TREATMENT OF HEPATITIS C

Treatment of hepatitis C antedated the availability of anti-HCV testing. Hoofnagle reported in 1986 on a small pilot study of chronic NANB hepatitis conducted at the NIH.⁸ Eight of ten patients appeared to normalize their transaminases within two to four weeks of beginning interferon therapy, although relapses occurred commonly following withdrawal. Two controlled trials were then conducted, and have recently been reported in *The New England Journal of Medicine*, with quite comparable results. In a multicenter trial sponsored by the Schering company, Davis reported on 166 patients.⁹ These patients received either one or three million units of alpha-interferon (Schering's brand, named Intron) three times a week for six months. AST levels in all were 1.5 times upper limit of nor-

mal for a year prior to treatment. Forty-six percent of those treated with 3 mU responded with complete normalization of AST, while only 28% of those treated with 1mU and eight percent of the untreated group showed a complete response. The response in cirrhotic patients was not significantly worse than that seen in those without cirrhosis. Unfortunately, approximately 50% of patients reverted to elevated transaminases after completion of the treatment period. In a somewhat smaller trial at the NIH by DiBisceglie, 41 patients were randomized to either two mU interferon TIW for six months or placebo injections.¹⁰ Ninety percent were anti-HCV positive when this was examined retrospectively. Forty-eight percent of the treated patients vs. five percent of the controls responded, but 80% of the treated patients relapsed following cessation of treatment. All this suggests that there may be a threshold of response which is different for different individuals and that higher doses may lead to better response rates and lower relapse rates. Common side effects included fatigue, malaise and low-grade fever and myalgias. Less commonly seen were personality changes, the development of thyroid auto-antibodies, hair loss and mild reversible bone marrow suppression. Particularly noteworthy is the decrease in platelets seen, since many cirrhotics in these trials already had platelets in the below normal range.

FURTHER TRIALS

Alpha-interferon has been manufactured by Hoffman-LaRoche also and was released by the FDA in 1987 for use in hairy-cell leukemia and Kaposi's sarcoma. No interferon product has been released by the FDA for the treatment of chronic hepatitis B or C at this time. Because of increasing interest in its use in NANB hepatitis, and because it is in fact a slightly different product, Roche's interferon is under intensive investigation as well as an anti-viral agent. Two trials of the use of the Roche alpha-interferon (brand name Roferon), are about to begin. Drawing in part on the experience in the

previous trials, the current protocol will examine the effect of dose more closely. The design is to be open-label, using either one, three or six million units thrice weekly for six months. Failure to obtain complete normalization of AST or relapse will result in a second six-month course using the next highest level—three, six or nine million units. Patients with one year of documented transaminases at least 1.5 times normal will be eligible if other causes of the abnormalities are excluded by routine serologies and liver biopsy. The three categories of patients will be those with previous transfusions, those with presumed needle stick-related exposure (either IVDA's or hospital personnel) and those with cryptogenic cirrhosis. The last category will need to have hepatitis C antibody tests positive before entering the trial, but that can be arranged through our office. Those in the first two categories do not need a positive test to enter but eventually these results will be known. Corticosteroid therapy or other immunosuppressives in the prior six months will preclude treatment in the trial. Similar further trials are underway under the supervision of the Schering Corporation, to improve on dosing schedules and gain further experience with the drug.

SUMMARY

Treatment of chronic hepatitis with interferon is in its infancy and it is likely that information that we learn today will markedly improve the treatment that is offered tomorrow. The limitations of interferon treatment at the present time are the lack of complete predictable responses in approximately half the patients and the relatively high relapse rates observed thus far. It is predicted that higher doses will result in better response and lower relapse rates, but this remains to be seen. The cost and the frequency of side effects will likely be significantly increased by escalation of dose, but the chance of eradicating an otherwise untreatable and not benign condition is tempting and will continue to challenge our best efforts. □

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SCMA

NEWSLETTER

AUGUST 1990

HIGHLIGHTS OF JULY 11 BOARD OF TRUSTEES MEETING

The board voted to include the AMA's Basic Benefit Plan, with the addition of coverage of family planning and sterilization services, in the SCMA Health Care 2000 plan.

Board members heard plans of a substance abuse project aimed at South Carolina middle school students modeled after a proposal developed jointly by the AMA and ABA. The SCMA, along with the South Carolina Bar, the SCMA Auxiliary, and the South Carolina Medical Assistants Association, will coordinate the project. The concept of the project is for a doctor and a lawyer to go together to a middle school audience and talk about the medical and legal problems associated with substance abuse. If you are interested in participating, contact your county medical society president or call Steve Williams at SCMA headquarters.

SCMA TO NOMINATE SMOAK FOR AMA BOARD OF TRUSTEES

Randolph D. Smoak, Jr., MD, past president of the SCMA and current chairman of AMPAC, will be nominated for a position on the Board of Trustees of the American Medical Association. The last AMA trustee from SC was Julian Price, MD, who served from 1953 to 1961 and was Chairman of the Board in 1961.

The cost of an election campaign for a national board is considerable, and every member of the SCMA is being asked to contribute \$50 or more to help in this effort. Send in your check payable to the SCMA and do your part to support Dr. Smoak's candidacy.

MEDICARE UPDATE

Reminder: Physician Submission of Unassigned Claims

You must submit unassigned claims to Medicare for your patients effective for services rendered after September 1. Carriers have been instructed by HCFA to require that you submit a fully completed HCFA 1500 standard claim form. You are prohibited from charging Medicare patients for this mandatory claims submission.

Be sure your staff has received the May/June 1990 Medicare Advisory from Blue Cross and Blue Shield about this and other Medicare requirements.

Reminder: Medicare Computer Edits

Although HCFA prohibits Blue Cross and Blue Shield from publishing the specific computer edits which require you to submit additional documentation in order to receive reimbursement, the general guidelines which are followed were published in the April 1988 Medicare Advisory. Your staff should be familiar with these guidelines. Your claims will be processed more quickly if you submit the necessary documentation with the original claims. Call the Medicare Service Center or Barbara Whittaker if you have questions about submission of documentation.

Medicare Billing Workshop

Medicare will hold a billing workshop Monday, August 27 at the Park Inn International on St. Andrews Road at I-26 in Columbia. The workshop will run from 10 a.m. until 3 p.m. with a one-hour lunch break at noon; lunch expenses are the participant's responsibility.

The workshop will cover HCFA-1500 billing instructions, Medicare Provider Remittance explanation, ICD-9-CM and CPT-4 coding, action codes and modifiers. The registration fee is \$15.00. For additional information, call the Medicare Service Center.

You will receive a July/August Medicare Advisory from Blue Cross and Blue Shield. Be sure your staff reviews this important information.

MEDICAID UPDATE

Third Party Liability ("Retro Review" Letters)

The SCMA is continuing to work with the State Health and Human Services Finance Commission to reduce the burden this requirement has on your office. Our goals are to obtain a waiver from Third Party Liability for office visits and to have HHSFC reimburse you. Then, if they believe there is another insurer, HHSFC, not your office, would contact the other insurer.

In the meantime, the following is intended to help you understand and comply with these requirements:

1. A "retro letter" is mailed to you if HHSFC becomes aware that the patient has other insurance after providing Medicaid payment to you.
2. Read the "retro letter" carefully -- you only need to mail a refund if you receive payment from the other insurance company.
3. If you receive a denial or no response (after you make two attempts to bill or contact the other insurer), you need to mail this information to HHSFC.

Do not ignore a "retro letter"; otherwise, HHSFC will recoup the funds.

Billing for Patients on Administrative Days and Medicaid Limits on Nursing Home Care

HHSFC will reimburse administrative days in any hospital for Medicaid eligible patients who no longer require acute hospital care, and are in need of nursing home placement which is not available at the time.

Physicians who are treating these patients can bill HHSFC for their services rendered to these patients using the same procedure codes that they use for their patients in nursing homes and skilled nursing facilities. Those procedure codes are in the range 90300-90470 and are listed in your CPT manual. The specific code you use would depend on whether it is a new or established patient and on the level of care given. You need to use place of service 1 when billing.

One limited examination per 30 days is required for all administrative day patients. However, Medicaid will pay for as many brief or limited visits as are medically necessary. Intermediate services are restricted to five per month and extended services are restricted to four per month. Additional intermediate and extended visits may be allowed if medical justification is submitted.

These same visit limitations apply for those Medicaid patients who are already residing in nursing homes or skilled nursing facilities and for patients who are dually eligible for Medicare and Medicaid.

If a patient has Medicare and Medicaid, Medicare should be billed for all visits it will cover. Any subsequent visits considered non-covered by Medicare which are within the Medicaid restrictions should be billed directly to Medicaid.

If you have questions or need help on Medicaid matters, please call your Medicaid Program Manager in Columbia at 253-6134.

PRO UPDATE

Observation Order

Carolina Medical Review (CMR) does not require a physician order for overnight observation; however, each case is reviewed by the PRO to determine what the physician's "expectations" or "intentions" were for the patient's care. Since the order "observation" is not required, but may be supported by the physician's documentation (that is, progress notes, etc.), SC physicians would be doing their hospitals a great service and could help avoid confusion if they would make their intent for "observation" clear for documentation.

Attestations

Attestation is the procedure by which the physician documents diagnoses and procedures performed on a patient. HCFA recently advised the PROs that for the physician's attestation to be considered correct, the attending physician must attest to the diagnostic and procedural information after all care has been rendered and before the hospital bills for the inpatient services. Physicians should remember that the attestation document is a significant element of the medical record but is not required for patients treated as outpatients or "observation" cases. Some hospitals continue to require that physicians complete an attestation even though the physician ordered outpatient or observation status for the patient. All too often these same cases are billed as inpatients and subsequently reviewed and questioned by the PRO.

AIDS UPDATE

The SCMA AIDS Task Force urges all SC physicians to care for HIV/AIDS patients. The Task Force feels that most care can be appropriately rendered on an outpatient basis. Watch for an update on AIDS to be published soon in The Journal of the South Carolina Medical Association.

FROM THE OFFICE OF LEGAL AFFAIRS

Charitable Immunity

South Carolina physicians are reminded of the limitation of liability when free medical services are provided to a patient. The law requires that an agreement be entered into before treatment stating that the physician is providing the service free of charge and that the patient is releasing the physician from liability for negligence. The law does not release the physician from liability for intentional or willful and wanton misconduct.

The SCMA has developed an appropriate form to be used by physicians providing free medical services. Copies are available to members at no charge by calling Steve Williams at the SCMA.

Hospital and Health Care Law Seminar

The SCMA will cosponsor with the SC Bar a continuing legal education seminar on issues concerning hospitals and physicians on September 28, 1990 at the USC School of Law. Among the topics to be discussed are the National Practitioner Data Bank, anti-trust, Medicare fraud, AIDS, hazardous waste, and hospital self-insurance. Application has been made for six hours of CME credit.

Members of the SCMA will be receiving registration material by mail soon. If you are interested in attending and do not receive

the mailer, please contact Steve Williams at the SCMA.

National Practitioner Data Bank

The National Practitioner Data Bank, established by the Health Care Quality Improvement Act of 1986, will become operational September 1, 1990. Any peer review decision made by a hospital which adversely affects a physician's clinical privileges, a decision by a state or local medical society adversely affecting membership status, a decision by a state board of medical licensure affecting license status, or any medical malpractice payment made after September 1, 1990 must be reported.

The AMA has published a new booklet titled "Informing Physicians about the National Practitioner Data Bank." This booklet provides information on how the Data Bank will operate and the risks involved in broad dissemination of information reported to the Data Bank. It is provided free to AMA members and can be obtained by calling AMA's Office of County/State Relations at 312-645-4412, or you may direct questions regarding the Data Bank to Steve Williams at the SCMA.

AMA'S MEDICARE "ANTI-HASSLE" BILL

SC Representatives Floyd Spence and Robin Tallon have joined as cosponsors of AMA's Medicare "Anti-Hassle" Bill, HR 4475, the "Medicare Physician Relief Amendments of 1990." Thus, all SC Congressmen and Senator Hollings support this measure which would implement five major reforms being sought to ease unnecessary burdens on practicing physicians and implement beneficial Medicare program changes.

APPLICATIONS FOR RESEARCH GRANTS-IN-AID

Applications for grants-in-aid are now available from the American Heart Association, SC Affiliate, Inc., with a deadline of December 3, 1990, for submission to the Association's Research Committee. General requirements are that applicants must have advanced degrees and contemplate significant basic or cardiovascular research in a non-profit institution with adequate facilities for their work.

Additional information and application forms may be obtained from the American Heart Association, SC Affiliate, Inc., PO Box 6604, Columbia, SC 29260. Awards are activated beginning on July 1, 1991.

This research program is separate from that of the American Heart Association, National Center, which also makes research awards available to scientists in SC. Those interested in inquiring about the national program should write the Director of Research, American Heart Association, 7320 Greenville Avenue, Dallas, TX 75231.

UPCOMING CONFERENCES

The SCMA, SC Hospital Association, SC Healthcare Financial Management Association and SC Society of Hospital Attorneys are sponsoring a workshop entitled "Anti-Dumping: It's the Law," on Thursday, August 30, 1990 at the Embassy Suites Hotel in Columbia. This program will be of special interest to ER physicians, nurses, special care nurses and medical records personnel. Registration fee of \$45.00 covers the cost of program expenses, refreshment breaks and lunch. To register or for additional information, contact Doris Clevenger, SCHA, 796-3080 in Columbia.

PUBLICATIONS/TAPES AVAILABLE

The AMA has produced a 10-minute videotape describing the American Medical Association's Medicare Reform proposal which would reform the present Medicare financing system into a fiscally-sound program that would guarantee continued access to health care for the elderly. This proposal, introduced in Congress as HR 2600 by Representative Charles Rose (D-NC), would provide older persons with vouchers to purchase more comprehensive benefits than present Medicare provides, including catastrophic protection, in the private sector. The videotape is being distributed widely to key organizations concerned with health care for the elderly to encourage broader understanding of this important proposal. To view the tape on loan, contact Kim Fox or Joy Drennen at SCMA Headquarters.

CAPSULES

Swift C. Black, MD, recently was presented a plaque of appreciation of his service as clinician for almost a quarter of a century in the Dillon County Health Department. Dr. Black retired from state service on July 1 but remains active in his private practice and in community medical affairs.

The South Carolina Chapter of the American Academy of Pediatrics has announced the following awards: Eugene A. Laurent, PhD, was named Child Advocate of the Year for his contributions to the health and well-being of South Carolina's children; Margaret Q. Jenkins, MD, was presented the Career Achievement Award for her superior accomplishments in the medical field; and Tom L. Austin, MD, received the President's Award for his service to the chapter, its activities and the children of the state. These awards were presented at the chapter's Annual Scientific Meeting in early August.

SCMA NEWSLETTER
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DISTRIBUTION OF MAJOR DEMENTIAS BY RACE AND SEX IN SOUTH CAROLINA*

CHARLES N. STILL, M.D.**

KIRBY L. JACKSON

DEBRA A. BRANDES

RUTH K. ABRAMSON, PH.D.

CAROLINE A. MACERA, PH.D.

Dementia has been known to physicians since the first century. Aurelius Cornelius Celsus originated the term. Thomas Willis introduced dementia to English readers by 1672.¹ Originally "out of one's mind", the definition of dementia has evolved to specify an organic mental disorder accompanied by deterioration of previously acquired intellectual abilities severe enough to interfere with social or occupational functioning, with impairment of memory, abstract thinking, judgment, impulse control, and personality change.² In the Twentieth Century, dementia has emerged from the shadows of antiquity to become the modern scourge of late life. Exact figures of the prevalence of dementia are not known for the United States population as a whole. However, estimates from studies on special populations indicate that more than 1.5 million adults suffer from severe dementia and that more than 2.5 million adults have mild to moderate dementia.

Alzheimer's disease (AD) reportedly accounts for 50 to 75 percent of dementia, indicating that at least two million American adults are victims of AD.³⁻⁵ Since persons with AD usually live from five to 10 years after onset of the illness, the potential costs of caring for such individuals are often overwhelming to caregivers.

* From the Department of Neuropsychiatry and Behavioral Science, School of Medicine (Drs. Still and Abramson) and the Department of Epidemiology and Biostatistics, School of Public Health, University of South Carolina, Columbia. This work was supported in part by a grant from the American Health Assistance Foundation, Rockville, Md., and was presented at the Southern Medical Association 83rd Annual Scientific Assembly, Washington, D. C., November 5-8, 1989.

** Address correspondence to Dr. Still at the South Carolina Registry for Dementing Illnesses, School of Public Health, University of South Carolina, Columbia, S. C. 29208.

In response to the formidable challenge, the School of Public Health established the South Carolina Registry for Dementing Illnesses on April 1, 1988, with an award from the American Health Assistance Foundation and matching funds from the State Health and Human Services Finance Commission. The Registry goals are (1) to identify all existing cases of dementia in South Carolina; (2) to study the demography and geography of dementia; (3) to identify service needs for families affected by dementia; (4) to study familial transmission patterns of dementia; and (5) to facilitate case-finding for research studies.

The Registry has developed plans for five general research areas of interest for the next project year, as follows:

(1) to prepare an annual prevalence report of all types of dementia by age, sex, race, education and other specific demographic characteristics so as to identify trends over time by type of dementia and subgroup affected.

(2) to study the effects of relocation and stress due to natural disasters such as Hurricane Hugo on the rate of admissions for dementia, and on requests for services in the affected areas of South Carolina.

(3) To identify familial cases of dementia for pedigree analysis to study mode of transmission and to assess needs for genetic counseling and services among family members, including support groups.

(4) to interact with dementia registries in other states so as to compare characteristics of the dementing illnesses occurring among different populations of various states and/or geographic areas of the United States.

(5) to conduct ecological studies on rates of types of dementia and environmental charac-

teristics for natural geographic boundaries within South Carolina, with special emphasis on the association between AD and fluoride concentration in drinking water.⁶

METHODS

While dementing illnesses are not yet specifically reportable diseases in South Carolina, the Registry has used the following surveillance definition of dementia: all chronic, presumed irreversible brain disorders with features of memory dysfunction or other global cognitive impairment in clear consciousness, including syndromes with evidence of intellectual deterioration which may be associated with emotional destabilization or behavioral abnormality.

Pending the adoption of enabling legislation allowing access to medical records of all South Carolina residents identified as having a dementing illness, written informed consent is obtained from the patient and/or a responsible party in a manner approved by the Institutional Review Board of the University.

A generally accepted group of minimal required data elements to assure consistency among data sets has been included on the Registry's core data abstract form which is also compatible with the NINCDS-ADRDA Work Group Criteria on the clinical diagnosis of Alzheimer's disease.^{7,8} This form also contains information on education, mental retardation and illiteracy; these factors are thought to be especially important in studying dementing illnesses in South Carolina.

The Registry staff consists of a project director, a medical director, an assistant project director, a secretary, and several graduate research assistants in the Registry office; in addition, three research nurses and one genetic associate comprise the field staff.

The Registry's computer system includes an IBM PS/2 model 70 (data management); model 60 (network service); model 30 (administrative); and model 25 (data entry). These are linked to each other by an IBM Token-Ring Network. Registry computers are located in a secure area with restricted data entry access to protect confidentiality. The data entry system is programmed in Ashton Tate's *dBase III Plus* and Nantucket's *Clipper* with menu-driven data entry screens in a format identical to the

abstract form to facilitate data entry by authorized personnel. As each new patient abstract form is entered, the system verifies that a unique identifying number has been assigned for that person, in order to avoid multiple entries for the same individual.

Data presented in this study were derived from abstracts of medical records of patients in the South Carolina Department of Mental Health system. The most recent primary and secondary diagnoses of dementia were recorded and analyzed by the computer system described above, based on the International Classification of Diseases, Ninth Revision (Clinical Modification), without regard to age of the patient. Patients with multiple dementia diagnoses were assigned to a single diagnostic category based on the following hierarchy:

(1) Alzheimer's Disease (AD)—includes the presenile and senile dementias: 290.0; 290.1 through 290.13; 290.2 through 290.3; 290.8 through 290.9; 331.0.

(2) Multi-infarct Dementia (MID)—includes the vascular dementias: 290.4 through 290.43.

(3) Alcoholic Dementia (ALC): 291.2.

(4) Other Medical Dementias (OTHER MEDICAL)—includes dementia in conditions classified elsewhere, 294.1; other specified chronic organic brain syndrome, 294.8; unspecified organic brain syndromes, 294.9; obstructive hydrocephalus, 331.4; Parkinson's Disease, 332.0; Huntington's Disease, 333.4; and senility without mention of psychosis, 797.

(5) Other (OTHER)—includes all other patients over age 65 with a diagnosis of unspecified dementia, 298.9.

PRELIMINARY RESULTS AND DISCUSSION

Frequency distributions of diagnostic categories among cases of dementia are shown in Table 1 (by sex); in Table 2 (by race); and in Table 3 (by education). These distributions were calculated for each diagnostic category from data derived from the first 1464 patients collected by the Registry. Women comprised 53.8% of all cases of dementia in this study (Table 1).

Alzheimer's disease accounted for 66% of all cases of dementing illness in the Registry to

TABLE 1
Frequency Distribution of Diagnostic Categories
Among Cases of Dementia By Sex

Diagnostic Category	Total		Male		Female	
	N	(%)	N	(%)	N	(%)
AD	971	(66)	338	(51)	626	(79)
MID	170	(12)	101	(15)	68	(9)
ALC	146	(10)	124	(19)	22	(3)
Other Medical	133	(9)	83	(13)	48	(6)
Other	44	(3)	19	(3)	24	(3)
Total	1464	(100)	665	(100)	788	(100)

AD = Alzheimer's Disease

MID = Multi-Infarct Dementia

ALC = Alcoholic Dementia

Other Medical = Medical Diagnoses w/Dementia

Other = Unspecified

date, comprising 79% of all cases of dementia in women, and 51% of all cases in men. There is an apparent preponderance of alcoholic dementia and multi-infarct dementia in men.

Though the proportion of blacks does not exceed one-third of South Carolina's population, blacks comprised 44.3% of all cases of dementia in this report (Table 2). The frequency of alcoholic dementia was higher in blacks, but the distribution of multi-infarct dementia was the same in both blacks and whites (12%).

Educational achievement did not appear to have a discernible effect on the distribution of diagnostic categories of dementia.

Among those aged 80 or older at the time of diagnosis, 82% were given a diagnosis of Alzheimer's disease, whereas the frequency of AD was 72% among those diagnosed between 65 and 79 years of age.

In summary, our preliminary findings are similar to those of the only prevalence data reported for severe dementia in a biracial US population. The Copiah County Study (Mississippi) showed that severe senile dementia of the Alzheimer type was at least as prevalent among blacks as among whites; that prevalence ratios were greater in females; and that for each race and sex, the corresponding prevalence ratios increased with advancing age, reaching seven percent for those aged 80 or older.⁹ Further work will be required to confirm these preliminary findings in a biracial population sample.

TABLE 2
Frequency Distribution of Diagnostic Categories Among Cases of Dementia By Race

Diagnostic Category	Total		Black		White	
	N	(%)	N	(%)	N	(%)
AD	971	(66)	417	(64)	523	(68)
MID	170	(12)	76	(12)	91	(12)
ALC	146	(10)	84	(13)	57	(8)
Other Medical	133	(9)	56	(9)	72	(9)
Other	44	(3)	16	(3)	22	(3)
Total	1464	(100)	649	(100)	765	(100)

AD = Alzheimer's Disease

MID = Multi-Infarct Dementia

ALC = Alcoholic Dementia

Other Medical = Medical Diagnoses w/Dementia

Other = Unspecified

TABLE 3
Frequency Distribution of Diagnostic Categories Among Cases of Dementia By Education

Diagnostic Category	Unknown		Less HS		HS/More	
	N	(%)	N	(%)	N	(%)
AD	132	(70)	510	(66)	309	(65)
MID	26	(14)	87	(11)	55	(12)
ALC	12	(6)	82	(11)	50	(11)
Other Medical	12	(6)	68	(9)	51	(11)
Other	6	(3)	25	(3)	10	(2)
Total	188	(100)	772	(100)	475	(100)

AD = Alzheimer's Disease

MID = Multi-Infarct Dementia

ALC = Alcoholic Dementia

Other Medical = Medical Diagnoses w/Dementia

Other = Unspecified

SUMMARY

Preliminary data from the newly implemented Registry for dementing illnesses was used to examine the distribution of four types of dementia in black and white residents of South Carolina. The data for 1464 subjects were abstracted by field research nurses in state mental health facilities. Overall, 649 patients (44.3%) were black and 765 (52.3%) were white. Women comprised 53.8% of all cases of dementia in this study. The overall distribution included 66% Alzheimer's disease (AD), 12% multi-infarct dementia (MID), 10% alcoholic dementia (ALC), nine percent other-medical and three percent other-unspecified. Though the proportion of blacks does not exceed one-third of the total population of S. C.,

blacks comprised 44.3% of all cases of dementia. AD accounted for 79% of all cases of dementia in women, but only 51% of such cases in demented men, who showed an apparent preponderance of MID and alcoholic dementia. The frequency distribution of MID was equal in blacks and whites. Educational level had no discernible effects. Though not directly comparable, these preliminary findings are similar to those of the Copenh County Study, including a higher frequency of AD with advancing age. □

ACKNOWLEDGMENTS

The authors wish to thank the South Carolina Department of Mental Health and the South Carolina Health and Human Services Finance Commission for their assistance in our data collection efforts.

ADDENDUM

A state law establishing the *Statewide Alzheimer's Disease and Related Disorders Registry* in the School of Public Health at the University of South Carolina became effective July 1, 1990.

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THE NEED FOR AN ALZHEIMER'S DISEASE PATIENT REGISTRY IN SOUTH CAROLINA*

CAROLINE A. MACERA, PH.D.**

CHARLES N. STILL, M.D.

SHIRLEY J. THOMPSON, PH.D.

DEBRA BRANDES

While the proportion of persons over age 65 increased nationally by 19 percent between 1980 and 1988, the percentage increase in South Carolina was 32 percent.¹ By the year 2000 the population over age 65 in South Carolina is expected to increase by 76 percent over the 1980 population. However, the largest increase (247 percent) is expected in the over 85 age group.² Since the development of dementia is strongly associated with age, the projections for the over age 65 population in South Carolina suggest that the number of persons affected with dementia will increase substantially over the next several years.

Dementia is a clinical syndrome defined as a loss of intellectual abilities of sufficient severity to interfere with social or occupational functioning. The prevalence of dementia is estimated to be about five percent among persons aged 65 or older, and about 20 percent in those aged 80 or older.³ A recent community study in Boston suggests that the actual prevalence may be much higher.⁴ Although there are well over 100 causes of dementia, 50 to 75 percent of those diagnosed with a dementing illness have Alzheimer's disease (AD).⁵ The major distinguishing features of AD are the progressive nature of the cognitive decline and memory loss, and the absence of other neurologic, psychiatric or systemic disorders sufficient to cause dementia.⁶ There is presently no effective treatment for AD.

The diagnosis of AD is usually made when

the disease is clinically advanced; even then, the diagnosis is made primarily by a history of cognitive decline and by exclusion of other dementing diseases. A definitive diagnosis requires biopsy or autopsy; nevertheless, over 80 percent of those with clinically diagnosed AD in the late stages have been established as AD upon autopsy.⁶ While the diagnosis of probable AD is made only after clinically apparent criteria are met, the decline in physical function may continue for up to 25 years, with a mean time from onset of symptoms to diagnosis of 8.1 years and a mean time from diagnosis to death of 3.4 years.⁷ For most of this time, the majority of the care is the responsibility of the family, thus exhausting financial and personal resources.

Considering the aging population and the length of time that persons with Alzheimer's disease require care, AD is expected to be one of the major public health problems of the next decade. This is especially true in areas such as South Carolina where the population over age 65 is growing at a faster rate than the rest of the country. Given this situation and the fact that there is no potential "cure" on the horizon, how can a registry help?

NEED FOR A REGISTRY

We do not know exactly how many patients in South Carolina currently have a diagnosis of AD. Furthermore, we have no idea how many new cases to expect next year. Granted, we do not know exactly how many South Carolinians have certain other diseases, but all AD cases will eventually require services and financial assistance. It is estimated that the *direct* cost of caring for an AD patient is about \$9,600 in the first year after diagnosis, and \$8,700 per year after that.⁸ The *indirect* costs, borne by the family members, are around \$9,000 a year.

* From the School of Public Health, University of South Carolina (Drs. Macera and Thompson and Ms. Brandes) and the W. S. Hall Psychiatric Institute (Dr. Still), Columbia.

** Address correspondence to Dr. Macera at the Department of Epidemiology and Biostatistics, School of Public Health, University of South Carolina, Columbia, S. C. 29208.

Even families that are well off may not be able to bear this burden alone for very long. If incidence rates are increasing, then we must start now to plan for future needs, including nursing home beds and adult day care centers. Even if incidence rates remain stable, the number of cases will surely increase due to the projected population increase in the over age 65 and the over age 85 groups.

Without a South Carolina registry, our projections are forced to rely on estimates of incidence and prevalence from studies conducted in New York, Florida, California and Iowa. The residents of these states do not have the same characteristics as South Carolinians; it is therefore not clear how accurate such estimates are for predicting future needs. Furthermore, risk factors for this disease may be affected by environmental and social factors unique to South Carolina. If so, these issues cannot be studied effectively elsewhere.

For many diseases, the use of routinely collected mortality data suffices for studying patterns over time. However, in the case of AD, patients often die from bronchopneumonia and cardiopulmonary diseases. The diagnosis of AD (or dementia) often is not recorded as an underlying cause of death, thus resulting in significant underreporting.⁹

ORGANIZATION OF AN AD PATIENT REGISTRY

Critical elements of any registry are case definition, case ascertainment, systematic recording and regular reporting. Difficulties in establishing a consistent case definition complicate the development of an Alzheimer's disease registry. Since registry personnel cannot personally confirm all diagnoses, typical registries adopt standard diagnostic criteria already used by clinicians. In the case of AD, a registry database is accurate to the extent that appropriate criteria for the diagnosis of dementia and the differential diagnosis of AD are utilized by the medical community. The use of ICD-9 codes in the registry ensures that the data are compatible with other registries.

The next issue has to do with collecting the cases and ensuring full case ascertainment. For chronic diseases that have a clear diagnostic test, such as cancer, patients become part of the database as diagnoses are made, usually

through pathology reports. For AD, case ascertainment could be routinely handled through a form submitted by the diagnosing physician similar to the mechanism used for reportable diseases. However, due to the difficulty in confirming this particular diagnosis, most cases of AD are identified in the later stages of the disease when services are most needed. However, small community surveys may need to be done to correct for undercounting.¹⁰

It is generally believed that an effective registry system requires that Alzheimer's disease and related dementias either be included as reportable diseases or subject to legally mandated reporting. Even if registry staff are available to abstract the medical record, legal sanctions are needed to protect the physician from problems associated with release of confidential medical information.

A registry generates and distributes regular reports (quarterly or annually) to those who may best utilize the information. Published reports should not allow any individual patient or family member to be identified, since the issue of confidentiality is of the utmost importance in any registry system.

BENEFITS THAT COULD ACCRUE FROM AN AD REGISTRY

With a registry of new cases, the incidence rate of the disease (number of new cases in a given time period divided by the population at risk) can be calculated annually. These rates, adjusted for the age of the population, can be compared over time. Then we would know whether the increase in the number of cases is due to an increase in the *rate* of disease over time or solely due to people living longer. We would also know how many cases occur among subgroups (males, females, blacks, whites) and whether rates among subgroups are changing over time.

Annual follow-up of AD cases allows calculation of prevalence rates of AD (how many existing cases there are at a given point in time divided by the average population at that point in time). Combined with incidence data, prevalence data are useful in projecting future service needs. Annual follow-up studies also allow us to monitor disease progression and survival among subgroups identified by economic status, race, gender, age at onset or ge-

netic transmission.

A registry can assist in identifying families where more than one member has AD, thus opportunity for more extensive studies of AD families. For reasons not yet fully understood, AD appears to occur in certain families. The relative importance of true genetic causes or shared familial risk factors that account for the clustering in families has not been fully determined. However, there is evidence that those with Down's syndrome, if they live long enough, will develop AD. This suggests the involvement of chromosome 21.

Additionally, a registry can provide a sampling frame for studies on etiology. Risk factors for the development and progression of AD need to be clearly identified. Through the registry, relatively inexpensive case-control studies can be conducted to determine if suggested risk factors are operating in a given population. Aside from age, putative risk factors that have been linked to the development of AD are family history of AD or Down's syndrome, aluminum toxicity, substance abuse, low education, head trauma, cigarette smoking, thyroid disease, mental retardation, Down's syndrome and a history of affective disorders.¹¹

CURRENT STATUS OF THE SOUTH CAROLINA REGISTRY FOR DEMENTING ILLNESSES

The South Carolina registry has been in operation (statewide) since 1988. Based on current population estimates and on conservative estimates of AD prevalence, there should be at least 15,000 persons in South Carolina with dementia; 7,500 to 11,250 of these persons should have AD. Currently there are approximately 3,400 patients whose medical records have been abstracted and entered into the registry system. Since dementia is not a reportable disease in South Carolina, most of these patients have been identified through the Department of Mental Health. While this database gives an accurate picture of the rate and distribution of AD in South Carolina's mental health system, our ability to make projections for the total population is limited.

The establishment of the South Carolina registry was possible due to financial support from the American Health Assistance Foundation (Rockville, MD), and the S. C. Health and Human Services Finance Commission. The

South Carolina Department of Mental Health and the University of South Carolina (Schools of Public Health and Medicine) contributed essential in-kind support. In addition, none of this would have been possible without the support of various agencies and groups within the state (Table).

To achieve the multiple benefits that can accrue from a statewide AD registry, we need the help and assistance of the practicing physician. With the support that the registry has received to this point, we believe that the registry will continue to grow and ultimately become a valuable asset to the medical community in South Carolina.

THE REGISTRY CONSORTIUM

Alzheimer's Association, S. C. Chapter
American Association of Retired Persons, S. C. Chapter
American Heart Association, S. C. Chapter
Central Midlands Regional Planning Council
Medical University of South Carolina
National Association of Social Workers, S. C. Chapter
S. C. Academy of Family Physicians
S. C. Center for the Study of Aging
S. C. Coalition for Public Health
S. C. Commission on Aging
S. C. Commission on Alcohol and Drug Abuse
S. C. Department of Health and Environmental Control
S. C. Department of Mental Health,
William S. Hall Psychiatric Institute
S. C. Federation of Older Americans
S. C. Gerontological Society
S. C. Gerontology Center
S. C. Health Care Association
S. C. Long Term Care Council
S. C. Medical Association
S. C. Nurse's Association
S. C. Psychiatric Association
S. C. Society of Hospital Pharmacists
S. C. Society of Internal Medicine
S. C. Society of Pathologists
S. C. State Budget and Control Board,
Division of Research Statistics

SUMMARY

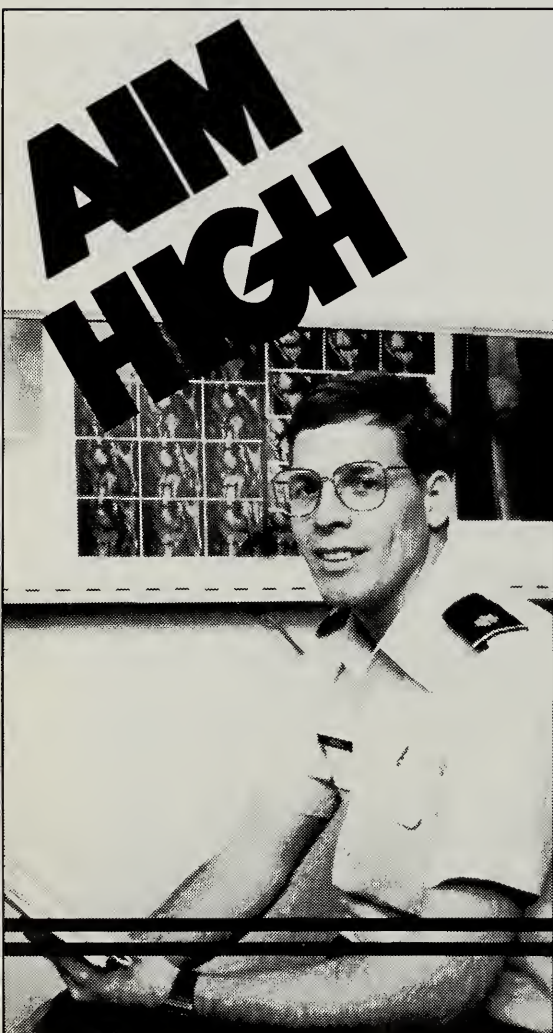
There has been considerable interest in establishing a statewide registry of Alzheimer's disease patients. The need for such a registry, how it could be effectively organized, and the potential benefits from such a registry are discussed. The current status of the South Carolina Registry for Dementing Illnesses is reported. □

ADDENDUM:

A state law establishing the *Statewide Alzheimer's Disease and Related Disorders Registry* in the School of Public Health at the University of South Carolina became effective July 1, 1990.

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Editorials

FIRST AMONG THE C'S

In the February issue of *The Journal*, the Rev. Joe Baroody of Florence reminded us that high-tech medicine does not replace the need for compassion. Reflecting on this message, I promised to answer the following question: "Which matters more, our competence or our compassion?" In the April issue, I argued that while both are clearly important and necessary, competence at what we are licensed and paid to do should have top priority. In his letter to the editor in the current issue, my good friend Dr. Lawrence Jowers takes me to task. Caring, he argues, comes first.

I am convinced that our difference is more semantic than real. Only a misanthrope would suggest that we not exercise compassion at every turn. Still, I defend my position that *qua* physicians, competence comes first. I'll also still hold that applied competence *is* compassion, while compassion without competence is fraud. Nonetheless, I respect Dr. Jowers' point of view and acknowledge that I can defend the above positions only by taking recourse to extreme situations.

Consider a patient presenting to the emergency room after the abrupt onset of fever, headache, and stiff neck. The triage nurse can choose between two physicians. Physician A can be expected to curse and snarl; physician B can be expected to heap upon the patient layer after layer of compassionate concern. Physician A can also be expected to complete the lumbar puncture and have penicillin G dripping into the patient's veins within 20 minutes. Physician B can be expected to postpone the lumbar puncture until the CT scan has been completed and even then—hours later—will prescribe the wrong drug. If assigned to physician B, the patient will probably die of meningococcal meningitis.

Physician C, who is known both for competence and compassion, is unavailable.

Choose between physicians A and B.

Still, I think that any difference between Dr. Jowers and myself can be resolved by appealing to a higher court. In the April issue, I ranked the four C's as follows: (1) courage (which makes everything possible); (2) competence (which establishes credibility); (3) consistency (which ensures that competence will become reality); and (4) compassion. In a footnote, though, I noted that compassion can be an enabling virtue to both courage and competence. Let's consider the foremost of these virtues, the first among the C's: courage.

What *is* courage? This problem has preoccupied moral philosophers since time immemorial. Most of them have agreed that courage is not synonymous with bravery, nor does courage imply the absence of fear. Rather, courage requires consummate use of our ability to reason, to be rational in the face of uncertainty and danger. Aristotle held that the courageous act must also be a critical one. Thomas Aquinas ranked prudence (or wisdom) first among the cardinal virtues since it so heavily influences the others. More recently, the philosopher Douglas N. Walton has argued for a concept of courage "like what the British call 'muddling through'—keeping one's head and doing a creditable job of deliberately acting sensibly and appropriately despite dangerous, painful, or very adverse circumstances."¹ Walton's analysis merits further consideration (Figure 1).

Taking his illustrations mainly from acts of heroism during warfare, Walton argues that courage is present when, through reasoning, obstacles are overcome to achieve a desirable goal. The courageous act requires two kinds of reasoning; moral reasoning to determine that the goal merits the risk and practical reasoning to design a plan of action. Note the presence of two facilitating virtues: altruism and persistence. Now we're getting somewhere!

In or near Columbia stand two monuments

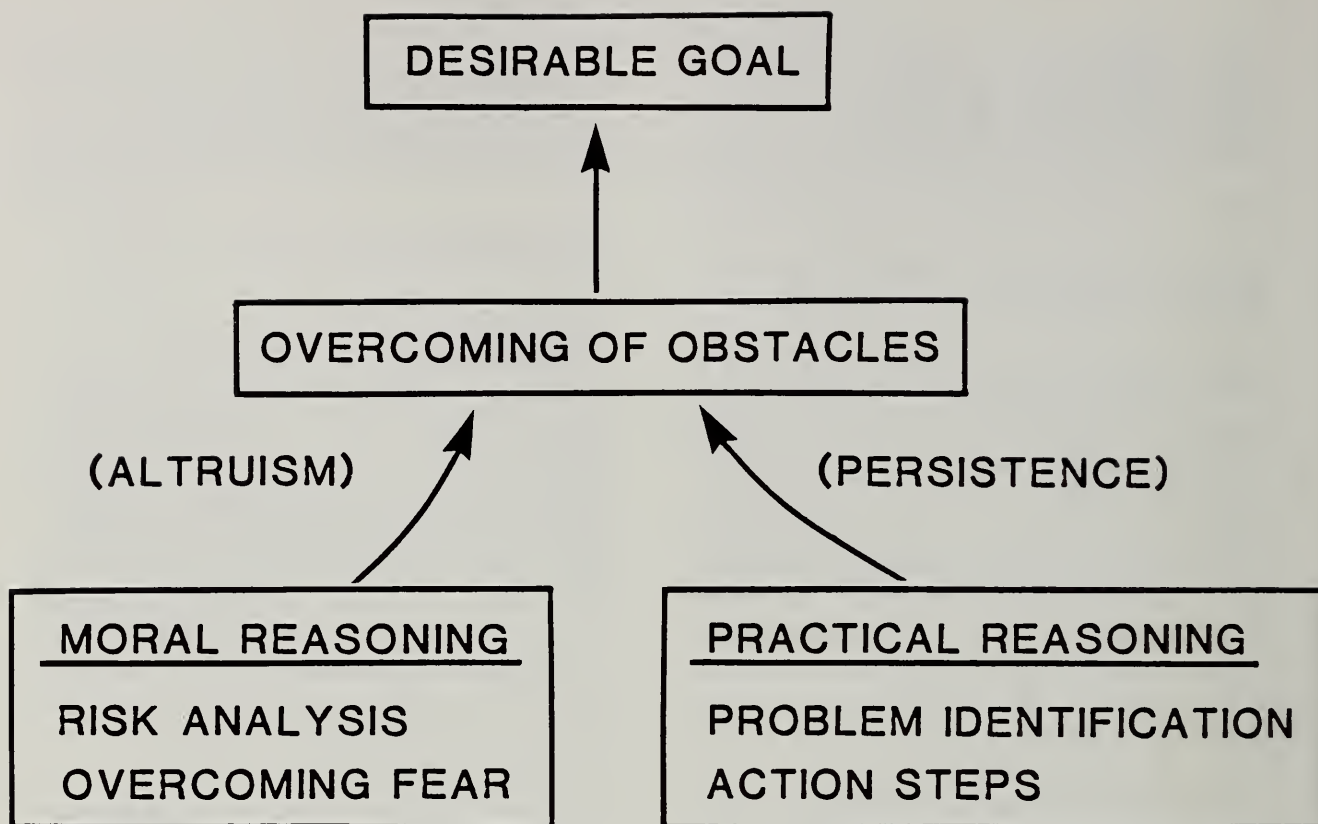


FIGURE 1. Courage, required to overcome obstacles in order to achieve a desirable goal, in turn requires both moral and practical reasoning. Altruism facilitates the former; persistence facilitates the latter (see text).

in memory of South Carolina physicians. Both were born in small towns; both became fired with ambition to contribute to medical science. One succeeded and became famous; the other did not. Both displayed enormous courage, in quite different ways.

In the northwest corner of a country churchyard in Congaree, S. C., stands an obelisk in memory of Dr. Theodore Brevard Hayne (Figure 2).² Fascinated by mosquito-borne infectious diseases, Hayne took a position with the Rockefeller Institute at its station in Lagos, Nigeria, to study yellow fever. Previous investigators, including famous ones, had died. Hayne knew the risk. He pressed forward with his research even after discovering dwarf variants among his broods. A French journalist recently wrote: "The ultimate courage is the willingness to sacrifice our own existence. It is that rock on which all other possible kinds of courage can be based."³ Theodore Brevard Hayne, M.D. *Altruism*.

In the northwest corner of the statehouse grounds stands a monument to Dr. J. Marion Sims, founder of modern operative gynecology (Figure 3). Vesicovaginal fistula had been the

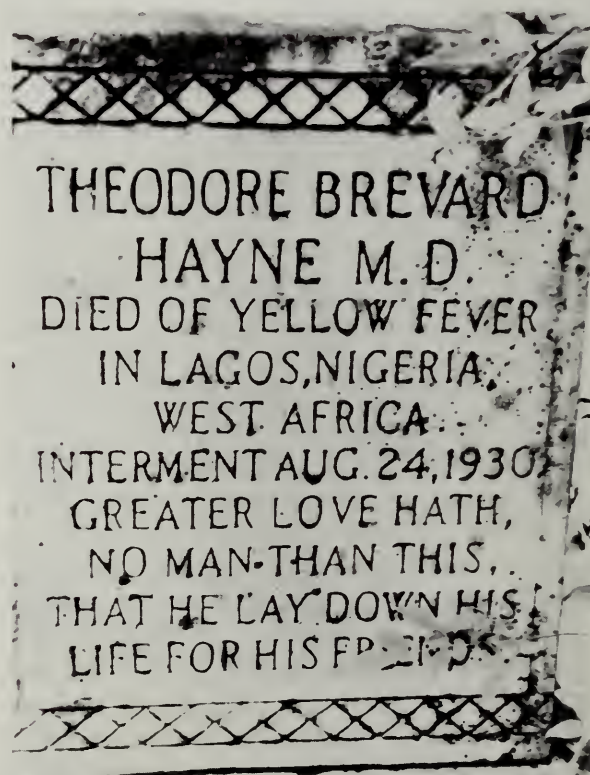


FIGURE 2. Inscription on the obelisk in memory of Theodore Brevard Hayne, M.D. (1893-1930).

great stumbling block to further progress in women's surgery. The stories of how Sims visualized the fistula and devised sutures that held have been told many times. Not so frequently told, though, is the record of how many times he failed—and kept on trying. For four years, he maintained at his own expense a small infirmary in his backyard and operated over and over again on its three occupants. Colleagues lost interest; relatives pleaded with him to focus on his family instead. It was on the 30th operation on a woman named Anarcha that he succeeded. The rest is history. James Marion Sims, M.D. *Persistence*.

Courage should permeate not only what we do as physicians, but also the entire doctor-patient relationship. One moral philosopher calls courage "a virtue for physicians in addition to the excellences of competence and compassion and a virtue for patients in addition to the excellences of compliance and gratitude."⁴ But reflecting further on the monuments to Hayne and Sims, one picks up a common word—more powerful than any we have discussed so far. And it is here that I think our points of view, Dr. Jowers, can be reconciled. The word is *love*.

In Hayne's case, the verse is from scripture: "Greater love hath no man than this that he lay down his life for his friends" (John 15:13). In Sims' case, it is from Hippocrates: "Where the love of man is there also is love of the art." Love—the acknowledged first of the so-called theological virtues—thus embraces both competence and compassion. In the last analysis, it is the main thing, perhaps the only thing, we have to offer. As physicians or as anything else.

Thank you, Rev. Barody, for stimulating these musings. And thank you, Dr. Jowers, for



FIGURE 3. Bust of James Marion Sims, M.D. (1813-1883), in the monument on the statehouse grounds, Columbia.

your objections. And if any readers out there disagree with any of us, let's hear from you!

—CSB

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“IN THIS ISSUE . . .”

The mission of The Journal is to advance the art and science of medicine; to promote the ideals of the South Carolina Medical Association; to encourage scholarship and good will among South Carolina physicians; and to disseminate information specifically applicable to the health care of South Carolinians.

The best writers seldom use the same phrases more than once. Aware of at least some of my quirks, I hope that nobody out there is keeping track by computer. However, repetitive use of one phrase seems unavoidable: “in this issue of *The Journal*.” As a prelude to discussing one or another paper, I see no really suitable alternative.

Recently, our Editorial Board approved a mission statement (above) for presentation to the SCMA Board of Trustees. The present issue fulfills, I think, the balance sought by our board. We strongly encourage original scientific observations made by practicing physicians, such as the paper by Dr. McIntyre and his colleagues. We encourage timely review articles by institution-based (or academic) physicians, as is the case in Dr. Lee’s paper. Finally, we encourage papers specifically applicable to the health care of South Carolinians. Meeting the latter desideratum are the two papers dealing with dementing illnesses. Each of these papers merits comment.

Dr. McIntyre and his colleagues report ex-

cellent results in carrying out coronary artery bypass surgery in elderly patients, and advise us that similar results should be achievable in most if not all medical centers. The risks are well-known, and they point out a 3.6% mortality rate and a 3.2% incidence of post-operative stroke. The authors provide a number of technical insights, such as maintaining perfusion pressure during cardiopulmonary bypass for those patients with documented left ventricular hypertrophy. We are reminded that age is a relative, not an absolute contraindication to risky surgery, and that the results are often gratifying.

For review articles by institution-based physicians, we generally favor papers of immediate clinical applicability. Since alpha-interferon therapy for viral hepatitis remains experimental, Dr. Lee’s paper does not meet this requirement. However, the paper was considered timely for two reasons. First, our understanding of hepatitis viruses is changing rapidly (Table). Hepatitis C (previously, parenterally-transmitted “non-A, non-B hepati-

TABLE
The Five Hepatitis Viruses

Type	Brief Synopsis
A	The hepatitis A virus is an RNA virus currently classified as a picornavirus. It causes an acute illness (“infectious hepatitis”) with a case-fatality rate of approximately 0.6%. However, neither a chronic carrier state nor progression to cirrhosis has been demonstrated.
B	The hepatitis B virus is a DNA virus currently classed among the hepadnaviridae. It causes an acute illness formerly known as “serum hepatitis” with a case-fatality rate of approximately 1.4%. Survivors are at risk of chronic hepatitis, cirrhosis, and hepatocellular carcinoma.
C	The proposed hepatitis C virus appears to be a medium-sized RNA virus. This virus is the major cause of parenterally-transmitted non-A, non-B hepatitis. Clinical features resemble those of hepatitis B, although the onset tends to be insidious and the course more protracted and subject to relapses.
D	Better known as the “delta virus,” the hepatitis D virus is a defective single-stranded DNA virus capable of causing infection only in the presence of active hepatitis B virus infection. In other words, it is a “fellow traveller.” Patients with hepatitis B who become superinfected with the hepatitis D virus are at risk of severe acute and also chronic illness.
E	Candidate viruses for enterically-transmitted non-A, non-B hepatitis have been identified. The clinical syndrome has been an acute illness in young to middle-aged adults, with a high mortality among pregnant women. There does not appear to be a chronic form. Large waterborne outbreaks have occurred in the developing world.

tis”) accounts for 20 to 40 percent of acute viral hepatitis in the United States. Screening of potential blood donors for the hepatitis C virus will be a major advance. Second, chronic viral hepatitis is one of the many diseases for which interferons may yet prove to be worthwhile, after decades of study. Is it possible that we will soon see a way to halt the inexorable progression of chronic hepatitis to cirrhosis?

Finally, the papers by Still et al. and Macera et al. address the issue of dementing illnesses in South Carolina. The first of these papers makes the point that the distribution of cases in South Carolina is similar to that of a county in Mississippi: Alzheimer’s disease occurs at least as

often among blacks as among whites, and women are especially affected. In the second paper, it is argued that accurate information about the distribution of Alzheimer’s disease would have major implications for health care delivery in our state.

To the fullest extent possible, we would like to have all of our issues display such a balance. And again, we welcome and encourage papers by practicing physicians. Our Editorial Board feels strongly that *The Journal* should be both *by* and *for* South Carolina physicians, and that journals such as ours should maintain a unique niche in American medical journalism.

—CSB

Letter to the Editor

To the Editor:

As one of your many admirers, I am distressed to find that I must disagree with you and your “new found feelings as to our place and obligations in patient contact (care)” as I interpret such to be expressed in your April ’90 Editorial in the JSCMA.

I would hope and pray that we physicians do not allow our ability to diagnose and treat, correct, cure, manipulate, or modify the ills and afflictions of our fellow man becloud our vision and that of our most talented specialists as to the importance of their technical skills in “patient care” and erroneously exaggerate the mastering of those skills at the expense of compassion.

Lest you forget, or didn’t know, only a few years ago only physicians started I.V.s, drew blood, inserted urinary catheters, etc.; now we physicians have learned that others can be trained to do these procedures and many more. So too, I can visualize the cardiac cath tech filling the order “have coronary arteriograms done in the AM” if indeed competency ever replaces compassion or even rules supreme.

No, your “Dr. Smith” cannot be excused for his technician talk to (not even with) the pa-

tient. More, if an “attempt to be compassionate” would have taken away from his ability to be a technician then a job change or title other than doctor would seem to be in order.

I believe that as doctors, our first obligation to our patient is to care not scare; to serve not to subject; to help not harm; to apply our talents (skills) with compassion for those who permit us to serve them whether we are PAID OR NOT.

Last, the secret of caring for the patient is not being able to do something to the patient but rather it is caring about the patient. Truly, as you said, never before has it been possible to do so much for so many—but on tomorrow our miracles of today will compare as the first steps of a child do to those of a Prima Ballerina in grace.

LAWRENCE V. JOWERS, M.D., LL.B.
231 Lancewood Dr.
Columbia, SC 29210

In response:

I thank Dr. Jowers for his comments and observations. My response is contained in the lead editorial in this issue.

—CSB

PHYSICIAN RECOGNITION AWARDS

The following SCMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned.

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SAMUEL CHANDLER BAKER, M.D., 1866-1918 PRESIDENT, SCMA, 1909

Samuel Chandler Baker was born at Oakland Plantation in Sumter County on December 15, 1866. His father, Dr. Charles Richard Furman Baker, was a prominent physician and a personal friend of J. Marion Sims. After early schooling in Sumter County, S. C., Baker entered Davidson College and graduated in 1886. He obtained his M.D. degree from the University of Virginia in 1888. While working on his medical degree, he was head of the Ridgeway High School for one year.

Returning to Sumter, Baker went into practice with Dr. John Bossard, and in 1894, with Dr. A. C. Dick, opened the Baker-Dick Infirmary. This later developed into the Sumter Hospital and still later, combined with the Mood Infirmary to become Tuomey Hospital.

Baker was the first in South Carolina to be elected to fellowship in the American College of Surgeons. He was active in medical and civic causes, holding many offices in the SCMA. While president of this group, he sought support and funding for a memorial to J. Marion Sims. Because of his efforts the statue of Sims on the State House grounds was erected. He was active in the AMA, the Tri-State Medical Association, and the Sumter County Medical Association. While President of the Sumter City Board of Health in the 1890s, he helped eradicate the epidemic of small pox which threatened the city.

In 1890 Dr. Baker married Jeannie McLellan Moses of Washington, D. C. This union pro-



The Sumter Hospital
(JSCMA 2:199, 1906)

duced two children: Emma Richardson and Charles Richard Furman who continued the family profession of medicine which spanned over 100 years.

During the early days of World War I, Dr. Baker took an active role in establishing the American Red Cross in his area. When the United States entered the war, he volunteered his services to his country. He was given the rank of captain and sent to New York for special training in brain surgery. It was here that he contracted pneumonia which sent him home to Sumter. He died on March 20, 1918, in the hospital he had founded.

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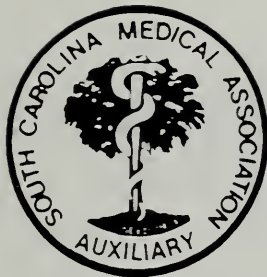
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Auxiliary Page

LEGISLATION REPORT

Legislative action has always been an important program for the SCMAA. It is believed that auxiliary involvement in legislative action is vital to continued quality of health care. The auxiliary legislative activities focus on legislation, rather than political action. It is also believed that if the SCMAA is involved in legislative action, we can help to ensure that every American continues to receive quality medical and health care. The Legislation Committee has been given the task of educating members of the Auxiliary on legislative issues affecting the practice of medicine. We intend to work hard on behalf of better medical legislation.

The first objective of the committee is to encourage 100% voter registration in all counties by November 1. We believe a unified effort to register all auxiliary members will be felt and heard in Columbia, South Carolina and Washington, D. C. In our medical community we must never become complacent or negligent in our right or privilege to vote. We encourage all Medical Society and Auxiliary members to register to vote and effectively use that power to vote.

The Legislation Committee's second objective is that of information and education. It is also believed that all auxiliary members must become more active in the political arena. Every member of SCMA and SCMAA needs to be more informed of state issues affecting medicine, and to know the official position of the SCMA. All county legislation chairmen will receive *Legislative Update* whenever it becomes available. The SCMAA plans to feature legislation at our fall board meeting on October 3. We will have as our guest speakers, the state Democratic and Republican party chairmen, Jan McKellar, Director of Health Policy Affairs, and Steve Williams, from SCMA. They will speak on important medical legislation.

The grass roots level of involvement is certainly the most important effort of all. The auxiliary members need to know their representatives in the General Assembly. We must know them on a social level and be aware of how they vote while they are in Columbia. One goal on this particular level is the phone bank. The Legislation Committee has urged every county to establish a phone bank. This will unite all of South Carolina Auxiliary members and inform them on a timely basis of important legislative issues.

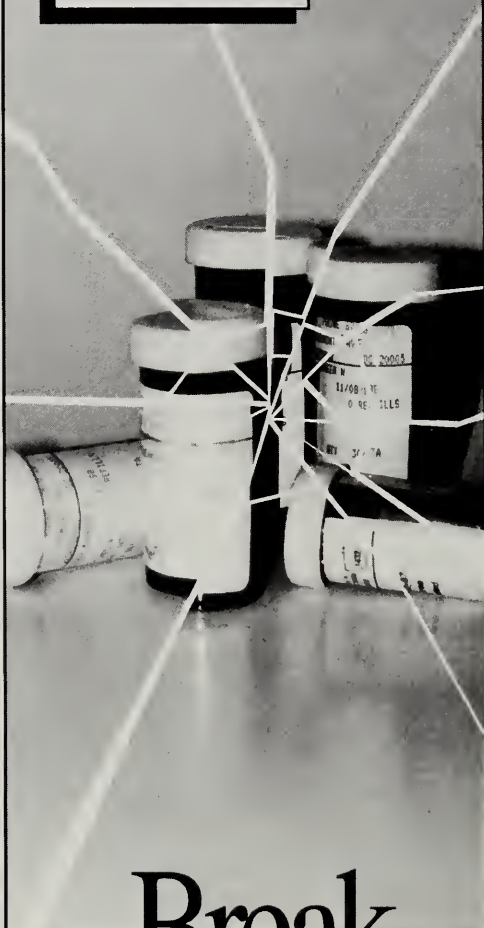
To encourage all auxiliaries to become members of SOCPAC is another important goal. It is very important to make sure the physician's view is heard in the legislature. We need to make a unified effort to succeed in our goal to promote educational programs and legislative action through SOCPAC.

These objectives and goals are many, as one can tell. The Legislation Committee believes it can reach these goals through effective communication and hard work. When the SCMAA becomes more politically aware and more politically active, we will improve the medical atmosphere in the State of South Carolina.

ROSEMARY M. COOK
(Mrs. David A.)
Legislation Chairman

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HUMAN IMMUNODEFICIENCY VIRUS AND THE SURGEON*

ANDRE HEBRA, M.D.

DAVID B. ADAMS, M.D.**

H. PRESTON HOLLEY, JR., M.D.

Acquired Immunodeficiency Syndrome (AIDS) is a severe manifestation of an infection by the human immunodeficiency virus (HIV). Transmitted through sexual contact, parenteral exposure, and perinatal transmission, AIDS has afflicted an estimated 100,000 Americans. Over 1,000,000 persons in the United States are infected with HIV.¹ Due to the nature of illnesses associated with AIDS, the surgeon is rarely involved in the treatment of an HIV infected patient. As the number of AIDS cases increases and therapy becomes more specific, surgeons increasingly will be involved in the care of these patients. We reviewed the surgical management of HIV positive and AIDS patients who underwent operations during their hospitalization.

SUBJECTS AND METHODS

This retrospective study included patients with HIV infection who had an invasive surgical procedure performed at the Charleston Memorial Hospital or at the Medical University Hospital from January 1985 to October 1988. Obstetrical cases and placement of cen-

tral lines were excluded from our study. Elective cases and trauma cases were reviewed. The patients met the Centers for Disease Control (CDC) AIDS case definition or demonstrated serum positivity to HIV at the time of operation or within one week of that date. All patients were followed for at least 30 days postoperatively.

RESULTS

The number of patients who tested positive for HIV during that period of time was 150. The number of patients from that group who had surgical procedures was 30 (20%). Age distribution was from three months old to 66 years with a mean of 34 years. There were 18 males (59%) and 12 females (41%). Ten patients were white (35%) and twenty were black (65%). Table 1 shows the type and number of surgical procedures performed. The number of trauma cases testing positive for HIV during the study was seven with two operations performed; one was a splenectomy for blunt abdominal trauma and the second was an open reduction and internal fixation (ORIF) of an extremity fracture. Table 2 shows risk factors for HIV infection identified. Twenty percent of the patients had no risk factors identified (history of homosexuality, sex with a known HIV contact, drug abuse, or multiple transfusions). Postoperation complications occurred in one case after

*From the Departments of Surgery (Drs. Hebra and Adams) and Medicine, (Dr. Holley) Medical University of South Carolina, Charleston.

** Address correspondence to Dr. Adams at the Department of Surgery, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S. C. 29425.

TABLE 1

Surgical Procedures Performed in
HIV Positive Patients

	(n)	(%)
Minor: Skin biopsy	3	10.0
Rectal biopsy	2	6.6
Lymph node biopsy	3	10.0
Kidney biopsy	1	3.3
Frontal brain biopsy	1	3.3
Open lung biopsy	1	3.3
I & D of abscess	3	10.0
Debridement of skin ulcers	1	3.3
Venous cut down	2	6.6
Tube thoracostomy	3	10.0
Release of contractures	1	3.3
Excision of thrombotic vein	1	3.3
Sub total	22	73.0%
Major: Humerus ORIF	1	3.3
Exploratory laparotomy-splenectomy	1	3.3
Expl.lap—lysis of adhesions	1	3.3
Thoracotomy-Aortic graft	1	3.3
Mitral valve replacement	1	3.3
CABG	2	6.6
Repair of Femoral Artery graft	1	3.3
Sub total	8	27.0%
TOTAL	30	100.0%

thoracotomy resulting in wound dehiscence and sepsis.

DISCUSSION

AIDS, a major public health threat, results in profound immunodeficiency accompanied by multiple medical disorders. HIV, a retrovirus, is the cause of immune suppression and is transmitted in a manner similar to hepatitis B virus.² Groups at highest risk include homosexual men, intravenous drug abusers, and hemophiliacs.³ Therapy is largely experimental with an overall 50% mortality in one year.⁴ AIDS does not develop in all serum positive patients, and it has been estimated that the mean incubation period for developing the syndrome after acquisition of the virus is 4.5 years.⁵ The frequency of AIDS cases has increased in near geometrical progression since it was first described in 1981. In a recent report from the Centers for Disease Control, the prevalence of HIV infection in the United States active duty military was found to be 1.3 per 1,000.⁶ The preva-

TABLE 2

Risk Factors for HIV Infection

	(n)	(%)
Homosexuality	17	(57%)
IV Drug Abuse	6	(20%)
Multiple blood transfusions	none	-0-
Job related exposure	none	-0-
Heterosexual exposure to AIDS	1	(3%)
No risk factor identified	6	(20%)
TOTAL	30	100%

lence of HIV infection has been reported to be higher in hospitalized patients. A study at Walter Reed Army Medical Center⁷ tested 536 inpatients over a three-week period and found an HIV prevalence of 3.7 per 1,000. During the same period of time, 1,110 outpatients were tested and the prevalence of HIV positivity was 1.8 per 1,000. In the same geographical area, the prevalence of HIV positivity in Red Cross blood donors was 1.1 per 1,000.

The number of HIV infected patients that will require a surgical procedure during their treatment for AIDS is unknown. We found that 20% of known HIV positive patients entering our two hospitals required operations during their hospitalization. Surgeons are at high risk of infection from their patients due to the nature and type of exposure to blood and body fluid secretions. It is mandatory that surgeons become familiar with problems in the management of HIV infected patients and understand the importance of preventive measures to avoid inoculation contamination with the HIV virus.

During our study period (January 1985-October 1988) there were 83,561 hospital admissions to the Medical University of South Carolina. The number of patients tested for HIV was 2,800 (3.3% of the admissions during that time). The number of patients that tested positive for HIV was 150 (5.3% of all patients tested for the virus). Of the HIV positive patients, 30 had operations (20% of the HIV positive patients). A predominance of young black males (mean age of 34 years old) was noted in our study population. In reviewing the risk factors for HIV infection, we found that 57% had a history of homosexuality, 20% had a history of intravenous drug

abuse, and only 3% reported heterosexual exposure to HIV infected individuals. A total of 20% of patients had no risk factors identified at the time of admission. These findings are consistent with the literature where serum positivity cannot be predicted on the basis of risk factors such as homosexuality and intravenous drug abuse.⁸ In our group of surgical patients, there were no cases of infection from blood transfusion.

Seventy-three percent of the surgical procedures performed in our group of HIV infected patients were considered minor operations (Table 1). They ranged from biopsy procedures and incision and drainage of skin infection to tube thoracostomy. Twenty-seven percent of the patients had major surgical procedures performed including thoracotomy with coronary artery bypass, mitral valve replacement, and exploratory laparotomy with splenectomy. Two of the major procedures were in trauma patients.

Of the 30 patients with surgical procedures performed at our institution, 15 (50%) were known to have AIDS or to be HIV carriers at the time of their procedures. With the exception of one trauma case, no major procedures were performed on unrecognized patients with HIV infection or AIDS. Sixty-nine percent of minor surgical procedures were performed in patients known to have AIDS.

The operative mortality (or death within 30 days of the procedure) was 10% (three patients). One patient died 24 hours after the procedure secondary to multiple trauma. One died of bacterial pneumonia and respiratory failure and one died of Kaposi's sarcoma and sepsis. Our postoperative complication rate was 3.3% and occurred in a single patient with wound dehiscence and sepsis after a coronary artery bypass. It is notable that 20% of the procedures were performed at the bedside.

Level I trauma patients represent a unique group of patients since their HIV status is usually unknown at the time of admission. Careful precautions must be taken in the management of all these patients. During the study period, 896 trauma patients were admitted to our Level I trauma center. Thirty-seven patients (4.1%) were tested for HIV. Of those,

seven were positive (18.9% of all trauma patients tested). Only two of the HIV positive trauma patients needed operations. The number of trauma patients tested for HIV in our institution has increased progressively since 1985. The fact that HIV testing takes at least 24 hours must be recognized by all physicians and surgeons working in trauma care. Baker and associates⁸ studied 203 major trauma patients tested for HIV and six (3%) were positive. Evidence of drug abuse did not prove to be significant in predicting HIV serum positivity. They concluded that infection control precautions were indicated for emergency department personnel and pre-hospital care providers when caring for all bleeding patients. In a follow-up study by Keller and associates,⁹ 2,302 adult patients were tested for HIV in the emergency room and 5.2% (119 patients) were positive for HIV. A predominance of black males with a mean age of 30-34 years old was reported. Thirteen percent of patients were HIV positive when risks factors for HIV infection were present. The most common injury associated with HIV positivity was penetrating trauma (13.6% of the patients). Seventy-seven percent of the 119 patients testing positive for HIV had unrecognized HIV infection by history at the time of admission.

In spite of the small number of patients positive for HIV managed by surgeons and the low risk of transmission of the HIV during an operative procedure,¹⁰ it is important to follow recommendations to reduce the risk of contracting the virus given the seriousness of AIDS. The risk to surgeons and operating room personnel is due to inadvertent inoculation of contaminated blood or body fluids through a scalpel laceration, needle puncture, splashing, or other contact with an open wound, the conjunctiva or the mouth.¹¹ Today, the concept of "universal precautions" implies that all patients should be assumed to be infectious for HIV and other blood-borne pathogens. Therefore, "universal precautions" should be followed when workers are likely to be exposed to blood and body fluids. The CDC has recently published guidelines for the prevention of HIV and hepatitis B transmission to health-care workers.¹² Neverthe-

less, surgeons' behavior changes when a patient is HIV positive, and it is important that all health care providers know when their patients are HIV positive. When operating on an HIV positive patient as well as when managing any trauma patient, recommended standards should be followed. The Medical College of Wisconsin in Milwaukee¹³ published a protocol to be used in the operating room. In addition, others⁸ reinforce the need to implement infection control precautions during resuscitative treatment whether or not the HIV status of the patient is known.

Available evidence demonstrates that the risk of transmission of HIV in the hospital is much smaller than the risk of nosocomial transmission of hepatitis B. Current information indicates that the impact of morbidity and mortality from hepatitis B transmission among health care workers is much greater than that of HIV.¹⁴ Since epidemiology of infection of HIV is similar to that of hepatitis B, preventive measures should always be undertaken.

Despite our best efforts to prevent occupational exposures, they will continue to occur. With each known HIV exposure, there is always great concern despite the epidemiologic evidence that the risk of infection from incidental exposure is low.^{15, 16} The issue of whether zidovudine (AZT) chemoprophylaxis should be offered to exposed persons remains complex and controversial.¹⁷ At this time such a decision remains a matter for individual consideration, but the issues have been thoughtfully considered and published elsewhere.¹⁷

SUMMARY

To assess the exposure risks for surgeons and nurses treating HIV infected patients at the Medical University Hospital and the Charleston Memorial Hospital, a retrospective review of HIV positive patients who underwent surgical procedures from 1985-1988 was undertaken. During that period, 150 patients tested positive for HIV of which 30 (20%) underwent 19 surgical procedures. The prevalence of HIV infected patients at our institution has been increasing over the last two years. 5.3% of the patients tested were positive for the virus. Evidence of drug abuse was not a predictive factor of HIV infection but homosexuality was present in 57% of our patients. The mean age of the surgical group was 34 years. Seventy-three percent of the patients underwent minor operations and 27% had major surgical procedures. Almost half of the operations were performed to treat an AIDS-related complication or as a diagnostic aid in the workup of the AIDS patient. Major operations performed were for treatment of a co-morbid condition not related to the HIV infection. Only two patients had operations for trauma. Operative mortality was 10% but no death was directly related to surgical intervention. In addition to universal precautions in the pre and postoperative period, operating room personnel must follow established protocols in the conduct of the operation to ensure the safety of all staff. □

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MRI UPDATE



Figure 1

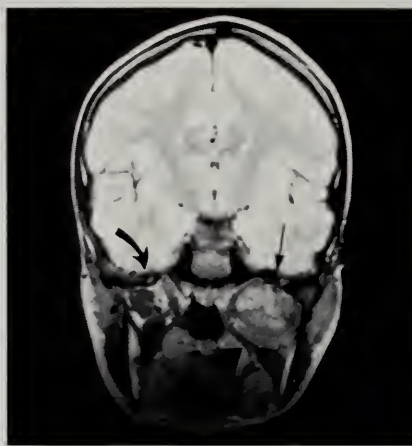


Figure 2

CLINICAL INFORMATION:

This is a 14-year-old male with headache and left jaw pain.

FINDINGS: The axial image (figure 1) demonstrates a 4 cm. mass centered in the left parapharyngeal space. It deforms the left nasopharyngeal wall, but the fat plane between the nasopharyngeal wall and the mass indicates that the mass did not arise from epithelium there. The mass extends anteriorly through the pterygopalatine fossa to abut the posterior wall of the maxillary sinus (arrowhead), but it does not appear to invade the sinus. The mass extends laterally adjacent to the neck of the mandibular condyle (large arrow). It is separated from the deep lobe of the parotid by the deep branch of the facial artery. The mass is separated by fat

from the internal jugular vein (open arrow). It abuts, but does not encase the internal carotid artery (long arrow). The coronal image (figure 2) demonstrates the mass effect of this large lesion (large arrow). Though the mass lies adjacent to the foramen ovale (small arrow) and appears to engulf an exiting branch of the mandibular nerve, it does not extend intracranially. The mandibular division of the fifth nerve lying just above the foramen ovale is shown on the normal right side (curved arrow).

COMMENT: MRI clearly demonstrates the size and extent of the mass in this difficult location. CT does not provide the multiplanar capability and soft tissue detail afforded by MRI which provides complete presurgical staging and analysis.

The differential diagnostic possibilities must include juvenile angiofibroma because of the patient's age and sex. Paraganglioma and schwannoma were also considered possibilities. Mixed tumor arising from the deep lobe of the parotid could produce this appearance, but the lesion appeared to be separate from the deep lobe. The biopsy diagnosis was "sarcoma". Rhabdomyosarcoma in this area more commonly occurs in younger children.



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RECENT TRENDS IN NEONATAL MORTALITY IN SOUTH CAROLINA*

ROBERT E. MEYER, M.P.H.**

WILLIAM M. SAPPENFIELD, M.D., M.P.H.

BRENDA COLLEY-NIEMEYER, M.S.P.H.

MARY PEOPLES-SHEPS, Dr. P.H.

DIANE L. ROWLEY, M.D., M.P.H.

During the 1980s, South Carolina's infant mortality rate has declined nearly 25%, from 16.2 per 1,000 live-born infants in 1981 to 12.2 in 1988.¹ About 70% of this decline can be attributed to improvements in neonatal survival (the first 28 days of life).¹ Despite these recent improvements, the mortality rate among South Carolina's neonates remains high compared with the rate among neonates in other states. In 1986, South Carolina had the nation's second highest neonatal mortality rate for all races combined, the third highest rate for whites, and the twelfth highest rate for blacks.²

Further reduction in South Carolina's neonatal mortality rate may be achieved by improving either of its two major components: (1) birthweight distribution (i.e., distribution of newborns by their birthweight); and (2) birthweight-specific mortality rates (i.e., risk of mortality by birthweight category).³

Efforts aimed at improving neonatal mor-

tality need to be targeted specifically at those alterable risk factors known to be related to either component of the neonatal mortality rate. However, the birthweight distribution and birthweight-specific neonatal mortality rates are generally influenced by different risk factors. The principal factors associated with birthweight distribution include socioeconomic status, medical condition, and maternal age, parity, nutritional status, and smoking, whereas the primary determinants of birthweight-specific mortality rates are gestational age and effectiveness of perinatal care.⁴

This study examines two questions related to South Carolina's recent neonatal mortality experience. First, to what extent did changes in birthweight distribution or birthweight-specific mortality contribute to the decline in the state's neonatal mortality rate? Second, based on these trends and on comparisons with other southeastern states, what are some of the possible strategies for achieving further improvements in neonatal mortality in South Carolina?

MATERIALS AND METHODS

The data used for this analysis were compiled by the Region IV Network for Data Management and Utilization (RNDMU). RNDMU is a collaborative initiative involving the U.S. Department of Health and Human Services, the University of North Carolina, the North Carolina State Center for Health Statistics, and eight southeastern states. RNDMU collects and publishes data on over 52 perinatal indicators derived from state vital records and census data.

To examine the factors responsible for the recent decline in neonatal mortality in South

* From the Department of Epidemiology and Biostatistics, School of Public Health, University of South Carolina, Columbia (Mr. Meyer); the Bureau of Maternal and Child Health (Mr. Meyer and Dr. Sappenfield) and the Division of Biostatistics, Office of Vital Records and Public Health Statistics (Ms. Colley-Niemeyer), South Carolina Department of Health and Environmental Control, Columbia; the Division of Reproductive Health, Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control, Atlanta, Ga. (Drs. Sappenfield and Rowley); and the Curriculum in Public Health Nursing, University of North Carolina School of Public Health, Chapel Hill, N.C. (Dr. Peoples-Sheps).

** Address for correspondence: Robert E. Meyer, M.P.H., Bureau of Maternal and Child Health, South Carolina Department of Health and Environmental Control, 2600 Bull Street, Columbia, S.C. 29201.

Carolina, we compared the birthweight distribution and birthweight-specific neonatal mortality rates for 1980-82 and 1984-86. Estimates of the percentage contribution of the decline in neonatal mortality rates due to changes in birthweight distribution or improved birthweight-specific survival were obtained using a partitioning formula developed by Kitagawa.⁵

We also compared the birthweight distribution and birthweight-specific neonatal mortality rates for South Carolina with those of North Carolina and the southeast region (excluding Florida) for the three-year period 1984-86. We chose North Carolina as a separate standard for comparison with South Carolina because the two states have similar health care delivery systems (i.e., regional perinatal programs) and rural-urban population patterns. We used indirect standardization to estimate the resulting percentage change in South Carolina's neonatal mortality rate had that state experienced the same birthweight-specific neonatal mortality rates as North Carolina or the southeast region during 1984-86.⁵

Finally, we examined the 1980-82 and 1984-86 delivery patterns and mortality rates of very-low-birthweight infants (500-1,499 g) by level of care for North Carolina and South Carolina. Although the criteria used for designating hospitals as Level I, II, or III varied from state to state, the general standards used to define Level III facilities were similar in both North and South Carolina. Thus, this analysis classified place of delivery as either

Level III hospital or other locations. We used the chi-square test to evaluate differences in mortality rates and referral patterns between the two states.⁵

Because of the differences in birthweight distribution and birthweight-specific mortality rates between whites and blacks, all analyses were carried out separately by race. Races other than black or white were included with blacks.

RESULTS

Trends in Birthweight Distribution and Neonatal Mortality, South Carolina

Between 1980-82 and 1984-86, the neonatal mortality rates in South Carolina decreased 17.5% for blacks and 17.3% for whites. However, very little of this decrease can be attributed to improvements in birthweight. The birthweight distribution for whites showed no overall improvement from 1980-82 to 1984-86 (Table 1). Among blacks, the percentage of 500-1,499 g infants increased from 2.18% in 1980-82 to 2.29% in 1984-86 (Table 1). However, the percentage of 1,500-2,499 g infants among blacks decreased slightly during this period, from 10.27% to 10.0%. The net effect of these shifts in birthweight distribution slightly hindered further reductions in the black neonatal mortality rate during the study period.

Between 1980-82 and 1984-86, both whites (Figure 1) and blacks (Figure 2) showed a general decline in birthweight-specific neonatal mortality rates. For both races, the entire decline in the overall neona-

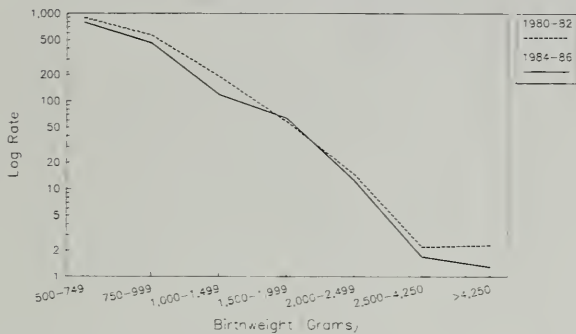
TABLE 1

Percentage of Live Births by Birthweight, by State or Region, by Year and by Race

Birthweight	White				Black and Other			
	1980-82		1984-86		1980-82		1984-86	
	SC	SC	NC	SE	SC	SC	NC	SE
500- 749g	0.17	0.16	0.18	0.17	0.45	0.52	0.51	0.48
750- 999g	0.20	0.23	0.22	0.21	0.52	0.54	0.56	0.52
1000-1499g	0.58	0.54	0.54	0.54	1.21	1.23	1.17	1.19
1500-1999g	1.22	1.20	1.22	1.22	2.53	2.46	2.28	2.36
2000-2499g	3.85	3.86	3.82	3.93	7.74	7.54	7.11	7.27
2500-4250g	88.30	88.05	88.17	88.09	85.54	85.59	86.03	85.99
>4250g	5.68	5.96	5.86	5.84	2.00	2.12	2.36	2.18

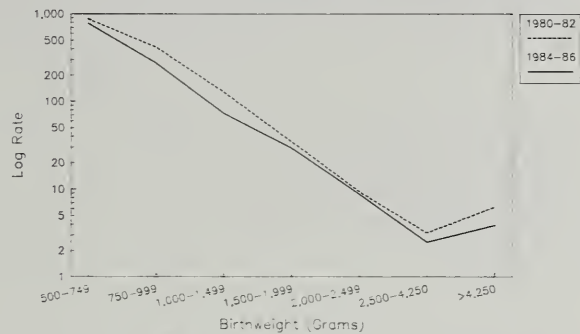
SC South Carolina; NC North Carolina; SE Southeast region.

Figure 1. Neonatal mortality rates* for white infants by birthweight, South Carolina, 1980-82 and 1984-86.



* Neonatal deaths per 1,000 live-born infants

Figure 2. Neonatal mortality rates* for infants of black and other races by birthweight, South Carolina, 1980-82 and 1984-86.



* Neonatal deaths per 1,000 live-born infants.

tal mortality rates during this period could be attributed to improvements in birthweight-specific survival. Among whites, about 64% of this decline was due to improved survival among 500-1,499 g infants. This observation is particularly noteworthy given that less than one percent of all white infants fall into this weight group. A similar pattern was seen among blacks: increased survival among very-low-birthweight infants contributed to about 70% of the observed decline in black neonatal mortality between 1980-82 and 1984-86. Improved survival among normal birthweight infants (2,500-4,250 g) accounted for about 29% of the decline in neonatal mortality rates for whites and about 22% for blacks.

Throughout the study period, blacks experienced at least a twofold greater percentage of low-birthweight infants than did whites (Table 1); however, the birthweight-specific risk of mortality for black neonates was lower

than the risk for whites for all weight groups up to 2,499 g (Figures 1-2). Above 2,499 g the rates for blacks were higher than those for whites. Overall, throughout the decade, the neonatal mortality rate among blacks was consistently higher than the rate among whites.

Birthweight and Mortality Patterns: South Carolina Compared to North Carolina and the Southeast Region

In 1984-86, the birthweight distribution for South Carolina whites was nearly identical to that for whites in North Carolina and the Southeast (Table 1). For blacks in South Carolina, the percentage of low- and very-low-birthweight infants was slightly higher than in either of the comparison areas (Table 1).

Compared to North Carolina and the southeast region, in 1984-86, white neonates in South Carolina had higher mortality rates for

TABLE 2

Neonatal Mortality Rates¹ by Birthweight, By State or Region and by Race, 1984-86

Birthweight	White			Black and Other		
	SC	NC	SE	SC	NC	SE
500- 749g	794.7	803.7	762.4	781.0	682.7	715.5
750- 999g	460.1	346.1	398.9	276.9	244.0	267.1
1000-1499g	118.8	127.4	128.8	73.6	66.7	79.7
1500-1999g	63.6	34.5	43.5	29.5	24.5	27.3
2000-2499g	12.5	12.9	13.7	8.8	9.6	9.2
2500-4250g	1.7	1.6	1.6	2.5	1.9	2.2
>4250g	1.3	1.3	1.7	3.9	0.0	4.4

¹ Neonatal deaths per 1,000 live births.

SC South Carolina; NC North Carolina; SE Southeast region.

TABLE 3
Percentage of 500-1,499 g Infants Delivered at Level III Hospitals, and Hospital-Level Neonatal Mortality Rates¹ for 500-1,499 g Infants, by State and by Race

	<i>White</i>		<i>Black and Other</i>	
	<i>SC</i>	<i>NC</i>	<i>SC</i>	<i>NC</i>
Percentage of 500-1499g Infants Delivered at Level III Hospitals:				
1980-82	53.6	62.8 *	52.8	61.3 *
1984-86	65.2 *	73.0 *	66.5 *	69.2 ^{ns} *
Neonatal Mortality Rate for 500-1499g Infants, 1984-86:				
Level III Hospitals	278.7	254.8 ^{ns}	238.4	205.7 ^{ns}
Other Hospitals	397.4 *	440.1 ^{ns} **	368.5 **	349.8 ^{ns} **

* $p < 0.001$; ** $p < 0.0001$; ^{ns} not significant at $p = 0.05$.

¹Neonatal deaths per 1,000 live births.

SC South Carolina; NC North Carolina.

several birthweight categories (Table 2). Higher rates were most evident among the 750-999 g and 1,500-1,999 g infants. Had white neonates in South Carolina had the same birthweight-specific mortality rates as white infants in North Carolina, the white neonatal mortality rate in South Carolina would have been reduced by an additional 11.9%. Likewise, South Carolina would have experienced a 7.6% decrease in white neonatal mortality had the birthweight-specific rates for the southeast region been applied to South Carolina.

The black birthweight-specific neonatal mortality rates in South Carolina in 1984-86 were higher than in North Carolina and the southeast region for most birthweight categories (Table 2). Had black neonates in South Carolina had the same birthweight-specific mortality rates as their counterparts in North Carolina or the southeast region, neonatal mortality among South Carolina blacks would have further decreased by 14.3% or 6.1%, respectively.

Impact of Perinatal Regionalization on Neonatal Mortality

There is some evidence that improvements in South Carolina's perinatal regionalization program may have contributed to the

enhanced survival among the state's very-low-birthweight infants during the study period. Concomitantly with the reduction in mortality among 500-1,499 g infants during the study period, the percentage of these high-risk babies born in Level III facilities increased significantly for both races (Table 3). Very-low-birthweight infants delivered in Level III centers also had a significantly better rate of survival than those born in other facilities (Table 3). Moreover, the survival of these infants improved in both Level III and non-Level-III hospitals during the study period.

There is also some evidence that these same factors may contribute to the disparity in birthweight-specific mortality between North and South Carolina. Throughout the study period, a greater percentage of very-low-birthweight babies were born in Level III hospitals in North Carolina than in South Carolina; however, the magnitude of this difference has diminished, especially among blacks (Table 3). Further, very-low-birthweight infants born in Level III hospitals in North Carolina had a lower risk of mortality than those born in similar facilities in South Carolina (Table 3). Although these differences were not statistically significant, they persisted throughout the study period.

DISCUSSION

During the study period, virtually no change in birthweight distribution was observed among white neonates, whereas among blacks, the birthweight distribution actually became more adverse during this period. Essentially all of the decline in neonatal mortality for both races was thus due to improvements in birthweight-specific mortality rates, particularly among 500-1,499 g and 2,500-4,250 g infants. Together, the increased survival among infants in these birthweight groups accounted for about 94% of the decline in white neonatal mortality rates and 92% of the decline for blacks.

Of the possible factors that may be responsible for the enhanced survival among South Carolina's very-low-birthweight infants, improvements in perinatal care are probably the most important. As is the case in other states, technological advances in obstetric, fetal, and neonatal medicine have undoubtedly played a major role in the declining mortality rate among these infants.^{4, 6-8} Much progress has also been made regarding prenatal screening and referral of high-risk mothers and infants. Lastly, specialized perinatal care has been made more available to these patients, largely through the development of regional perinatal networks and state-supported programs such as the High Risk Channeling Project.⁹⁻¹¹ Further research is needed to evaluate the effectiveness of South Carolina's perinatal regionalization program in reducing neonatal mortality, but the data presented here and in other studies are encouraging.¹²

For the period 1984-86, we found little difference in the birthweight distribution of both white and black newborns between South Carolina, North Carolina, and the southeast region. In contrast, the birthweight-specific neonatal mortality rates were more favorable in these other states than in South Carolina, especially among the smaller newborns (500-1,999 g).

This disparity in South Carolina's birthweight-specific mortality is evident in comparisons with states outside the region as well. For example, in a recent study that compared South Carolina's neonatal mortality

with that of Massachusetts, differences in birthweight-specific mortality rates accounted for about 50% of the excess mortality among South Carolina whites and for 100% of the excess among blacks.¹³

The reasons for the survival disparity between North and South Carolina's very-low-birthweight infants are unclear. However, the present study suggests that differences in referral patterns and, to a lesser extent, in risk of mortality by level of care may be two contributing factors. Our analysis did not assess other factors—such as morbidity patterns or the frequency of preterm births—that may help explain these differences.

Our findings suggest that further reductions in neonatal mortality are possible in South Carolina through continued efforts aimed at improving the survival of very-low-birthweight infants as well as term neonates. Although the state has made considerable progress in this area in recent years, the experience of other states in the region suggests that there is room for additional improvement. The technology necessary to save many of these newborns already exists within the state's perinatal centers. Greater effort is needed to ensure that this technology is more readily accessible, both prenatally and perinatally, to all mothers and infants who may benefit from it. This goal can be accomplished most effectively by strengthening the state's regional perinatal networks. Combined with continued efforts to prevent low-birthweight and cause-specific risks for mortality (such as congenital heart disease and infectious diseases), this may be the next decade's most effective strategy for achieving further reductions in South Carolina's neonatal mortality.

SUMMARY

This study examines some of the primary factors responsible for the decline in South Carolina's neonatal mortality rate during the 1980s. Essentially all of the observed decline between 1980-82 and 1984-86 could be attributed to improved birthweight-specific survival rather than improvements in the infant birthweight distribution. Improved survival of 500-1,499 g infants accounted for 64% of the decline in white neonatal mortality.

ty and 70% of the decline among blacks. Also, during this period, the percentage of 500-1,499 g infants delivered at Level III hospitals increased significantly for both race groups. Comparisons with other southeastern states suggest that further reductions in South Carolina's neonatal mortality rate are possible through continued efforts aimed at improving birthweight-specific survival. Existing state-supported programs such as regional perinatal referral networks and the High Risk Channeling Project will continue to play an important role in maintaining the decline in the state's neonatal mortality rate. □

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SEPTEMBER 1990

MEDICARE UPDATE

Medicare Workshops

The Medicare billing workshop held recently in Columbia was well attended. It is imperative that you preregister for such seminars and meetings, as 50 to 100 people were not preregistered for the Columbia workshop and their entrance was delayed and seating was not available for all.

New Physician/Office Relocation

If you are a new physician or relocating your office, you should notify Medicare at: Professional Reimbursement, I-20 and Alpine Road, Columbia, SC 29219.

Medicare Patients and Superbill

Do not give a Medicare patient a superbill after September 1, 1990. If the patient files the superbill and his/her claim is the first received, the physician will be charged with a violation. For every 10 violations a \$2,000 sanction will be imposed.

Clinical Laboratory Charges

All clinical laboratory charges must be submitted as assigned claims. Sanctions will be imposed for violations.

Patient Refusal to Sign Insurance Forms

If a patient refuses to give you his/her Medicare number, have the patient sign a statement saying that he/she refused to give the number, and keep this signed statement in the patient's file for documentation.

Crossover Claims

If you want your claims to cross over from Medicare to BC/BS, Medigap or Medicaid, you must use your social security number in block 30 of the HCFA 1500 form. The Medicare ID number goes in block 31.

Patient Signature Requirements

Once you have obtained a "signature on file" signature, it is valid for a lifetime.

HCFA 1500 Form

A revised HCFA 1500 form will be released at the end of 1990 or the beginning of 1991. Watch for more information later this year.

MEDICAID UPDATE

HHSFC Position Available

The State Health and Human Services Finance Commission is seeking a full-time physician to provide medical expertise and guidance to agency management in the formulation, establishment and administration of policy governing the state's Medicaid and human services program. To be considered for this vacancy, you may submit a written request along with a completed state government application to: HHSFC Bureau of Personnel, PO Box 8206, Columbia, SC 29202-8206.

SC REGULATION OF UTILIZATION REVIEW COMPANIES

The SCMA recommends that your office request each UR company to provide its "SC Certification Number" in order to assure that each one has been certified by the SC Department of Insurance. In addition, a list of the certified UR companies can be obtained from the SCMA by calling Kim Fox at SCMA Headquarters, or you may contact Mr. Tim Baker, Utilization Review Section, SC Department of Insurance, PO Box 100105, Columbia 29202-3105, 737-6100.

Please recall that insurance companies which administer/provide health insurance in SC do not need a certification number.

If you identify a UR company which appears to not have certification, or if you have complaints regarding excessive or improper utilization review by either UR or insurance companies, you are encouraged to inform Mr. Baker at the Insurance Department.

For additional information or if you have questions, contact Barbara Whittaker at SCMA Headquarters.

ACTIVE DUTY MILITARY STATUS

If a physician or other insured under the SCMA's MIT health insurance plan is called to active duty military status, it is possible to cease premiums and coverage temporarily. Please call the MIT staff at 1-800-327-1021 (or 798-6207 in Columbia) if you wish to discuss this option.

The SCMA has also received clarification regarding the possibility of suspending the SCMA-sponsored disability insurance policy while on active duty. Please call Bill Mahon at the SCMA, or John Thorne or Billy Thornton (252-3441 in Columbia). You may also request the SCMA to prorate your SCMA dues for the time you

are in active duty military status. Contact Julia Brennan at the SCMA for details.

FROM THE SCMA OFFICE OF LEGAL AFFAIRS

Medical Services to Jehovah's Witnesses

The South Carolina Hospital Liaison Committee for Jehovah's Witnesses has asked the SCMA to assist them in locating physicians in SC who are interested and willing to provide medical care to members of the congregation under the restrictions of the faith relating to blood usage. Jehovah's Witnesses do not accept transfusion of blood, blood products or blood fractions in their medical care. However, normally they will accept intraoperative autologous blood, i.e., a cell saver. Upon entering a hospital, members routinely sign a release from liability arising from an adverse effect resulting from withholding blood transfusions.

Members of SCMA interested in providing medical services to Jehovah's Witnesses should contact Timothy Brooks, Chairman, Jehovah's Witnesses Hospital Liaison Committee, in Newberry at 276-2692.

Allowable Charges for Copies of Medical Records

Under current SC law, the following charges apply to copies of medical records:

1. For copies of records concerning an incident related to automobile insurance or Workers' Compensation, a provider may charge 50 cents per page with a minimum fee of \$10.00, whichever is greater.
2. For copies of records concerning any other situation, a provider may charge a reasonable fee, at the provider's discretion.

Under current guidelines adopted by the AMA's Council on Ethical and Judicial Affairs, a physician should make a copy of the record available when requested by the patient after the patient executes a release for the record. The physician may charge a reasonable fee for copying the record. A physician should never refuse to provide a copy of the record because the patient's account is delinquent.

SOUTH CAROLINA HEALTH INSURANCE POOL

We have received several inquiries from physicians regarding information for their patients on the SC Health Insurance Pool. SC Act 127 of 1989 created a Health Insurance Pool to make health insurance coverage available to those eligible South Carolinians who may not be able to obtain it elsewhere.

You may advise such patients that they may be eligible for SCHIP coverage if an insurer has refused to issue them health insurance for health reasons, has refused to issue health insurance except with a coverage reduction or exclusion for more than one year, has refused to issue health insurance except at a rate greater than 150 percent of the SCHIP rate, or has sent them a notice that the premium for their current policy is or will be greater than 150 percent of the SCHIP rate.

An information packet, which includes general information, application form, employer certification of eligibility form, evidence of residency eligibility form, rate sheet and bank draft authorization form, is available from SCHIP, PO Box 61173, Columbia 29260, or for additional information call 736-0043 in Columbia or 1-800-868-2503 outside Columbia.

AMA MOVES TO NEW LOCATION

The American Medical Association completed its move to new offices in late August. The address is 515 North State Street, Chicago 60610. The general office telephone number is (312) 464-5000.

CME ACCREDITATION

The James F. Byrnes Medical Center in Columbia has recently been surveyed by the SCMA CME Committee and awarded two years' accreditation as an accredited sponsor of continuing medical education for physicians. This brings the number of organizations/institutions in the state which have been accredited by the SCMA to a total of nine.

If you are interested in accreditation for your hospital to offer AMA Category I credits for continuing medical education, you may contact Joy Drennen at SCMA Headquarters for information and application form.

WORKERS' COMPENSATION CONFERENCE

The SC Workers' Compensation Educational Association will hold its annual conference at the Marriott Hotel in Hilton Head on October 14-17. Discussion topics include mental cases in SC Workers' Compensation, hazards of toxins in the workplace and closed head injuries. For more information, contact John Nabors, SCWCEA Executive Director, 2233 Baxter Street, Cayce, SC 29033, 794-3437.

SCMA NEWSLETTER
is a publication of the
South Carolina Medical Association
Contributions welcomed.
798-6207, in Columbia
1-800-327-1021, outside Columbia

COMPRESSION PLATE OSTEOSYNTHESIS FOR THE TREATMENT OF MANDIBULAR FRACTURES*

DONALD JAMES WALDREP, D.M.D., M.D.

WILLIAM A. TERRANOVA, M.D.**

The mandible is involved in over half of all cases of facial fractures; in half of mandible fractures more than one anatomical site is involved. There are many causes of mandible fractures, but motor vehicle accidents and physical assaults predominate. Most patients are male (75%) and young (mean age 33 years). Fractures most commonly occur in the mandibular body, angle, and condylar neck, although the exact rank order varies from study to study depending on patient age, and the mechanism of injury.

The maxillo-mandibular complex is one of intricate structure and function. The ideal treatment of mandibular fractures, therefore, would insure correct anatomical positioning of the affected structures yet allow early restoration of function. Because of the inability to immobilize fracture fragments rigidly by internal means, most traditional methods of treating mandible fractures have relied on four to six weeks of maxillo-mandibular fixation (MMF). Although usually successful in terms of bony union and restoration of proper occlusion, these methods are not without morbidity in terms of dental hygiene, proper caloric intake, and overall tempero-mandibular joint function (particularly if this area were damaged initially).¹⁻⁴

The availability of plate and screw osteosynthesis for rigid internal fixation has

provided us with a powerful new tool in the management of mandibular fractures.

COMPRESSION OSTEOSYNTHESIS

Why is rigid fixation so important? Because of the way bone heals.⁵ Osseous tissue, like soft tissue, may heal by primary or secondary intention. Secondary healing is characterized by callus formation and long term bony remodeling. Secondary healing prevails when there is a gap of more than one to two millimeters between fracture ends or when there is mobility between fracture fragments. This situation is present when splints, interosseous wiring, and/or MMF are employed in fracture fixation. Primary healing, in contrast, is characterized by direct bony formation without the intervening step of callus formation. Bony union is more likely, is achieved more quickly, and is of greater strength. Primary healing occurs when bony edges are less than a millimeter apart and are rigidly fixed. Compression across the fracture site improves bony healing to an even greater degree.

Initial plating systems were designed for midfacial and peri-orbital fracture fixation and were made of stainless steel. These systems were not rigid enough for mandibular applications, did not provide compression, and required removal after healing. More recent equipment has taken advantage of stronger, more inert metals. Compression can be achieved and the plates need not be removed. We use the Luhr MCS system manufactured and distributed in the United States by Howmedica, Inc. Other systems are available. The Luhr system plates and screws are made of Vitallium®. Screws are self tapping (Fig. 1).

Plates are either curved or straight and of various lengths. Central holes are designed

* From the Division of Plastic and Reconstructive Surgery, Medical University of South Carolina, 171 Ashley Avenue, Charleston. Dr. Waldrep, who completed this work as a senior medical student, is now a resident in surgery at Cedars Sinai Medical Center, Los Angeles, California.

**Address correspondence to Dr. Terranova at the Division of Plastic and Reconstructive Surgery, Department of Surgery, Medical University of South Carolina, Charleston, S. C. 29425-2271.



FIGURE 1. A Luhr plate and screw.

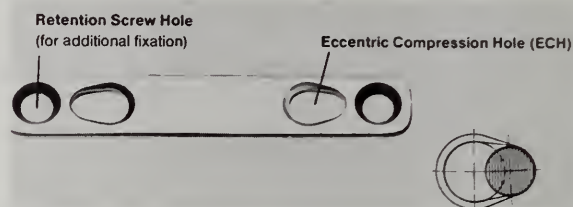


FIGURE 2. A Luhr compression plate. Note the eccentrically designed compression hole.

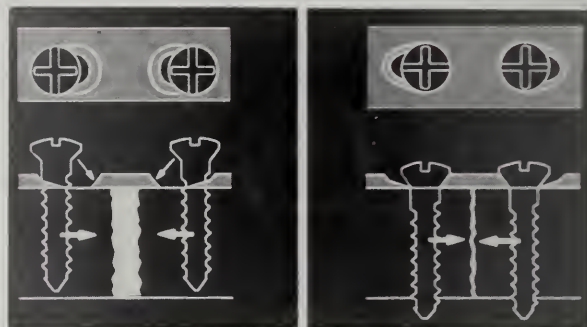


FIGURE 3. As screws are inserted, they slide toward the fracture site, compressing it.

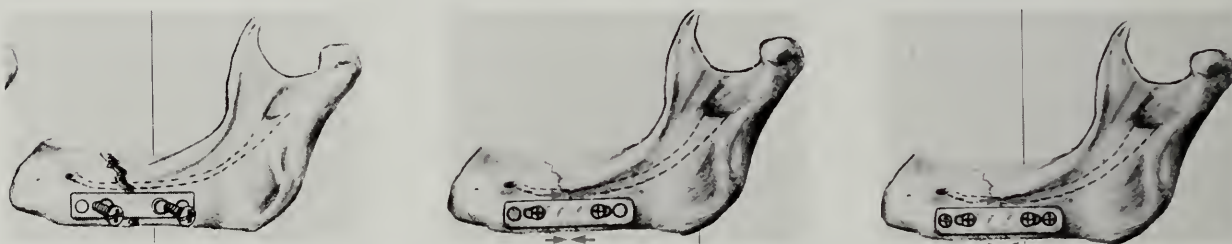


FIGURE 4. A-C. Schematic representation of plate compression of mandibular body fracture.

eccentrically and allow for compression (Fig. 2). The more lateral holes are concentric and provide added rigidity to the fixation. Compression is obtained as the spherical screw head glides down the inclined plane of the eccentrically shaped drill hole. The screw is inserted into the smaller or lateral side of the hole. As insertion of the screws is completed, the heads slide medially toward one another, thus compressing the fracture edges (Fig. 3). Fixation is further stabilized by the insertion of additional screws in the more lateral, non-compression sites (Fig. 4).

Plates can be used in a non-compression mode by simply drilling and inserting the screw into the wider, medial aspect of the eccentric hole. As well, the plate can be applied with less than maximal compression (if desired) by inserting screws on one side of the fracture in the non-compression mode and those on the other side in compression fashion.

TECHNIQUE

Plates can be applied via an intra-oral approach.^{1, 6, 7, 8} This avoids the disadvantage of external incisions such as scarring and possible damage to the marginal mandibular nerve. As with all other methods of fracture management the pre-morbid occlusion is obtained and held with MMF before any bony fixation is attempted, though it may be released post-op.

Plating of fractures of the symphyseal and parasymphyseal areas is relatively straightforward. Drilling the holes and inserting the screws is simply accomplished after a buccal incision is made and the mandible exposed (Fig. 5, 6). The mental nerve must be protected and curved plates can be of great assistance here. The plate is applied at the lower border of the mandible to avoid damage to the tooth roots. Screws can be inserted unicortically (buccal only), but bicortical application (buccal and lingual) is preferred.



FIGURE 5. Intra-oral exposure of para-symphysal fracture.

The intra-oral technique is more difficult in body and angle fractures but is still doable (Fig. 7-9). In these areas, drilling of holes and insertion of screws must be done through an additional transbuccal stab incision. This heals well and there is minimal risk to the marginal mandibular nerve. There are now right angle drills and screw drivers available for use in these more posterior areas if one wishes to avoid the additional transbuccal incision.

After rigid fixation is obtained, MMF can, in most instances, be removed.^{1, 3, 6-8} This allows immediate mobilization of the mandible post-operatively thus avoiding the morbidity of prolonged MMF. This may arguably be the greatest advantage of plate fixation as immediate mobilization can avoid the particular morbidity of MMF such as poor caloric intake (especially in diabetes, the



FIGURE 6. The last screw site is being drilled.

elderly, and the malnourished). poor oral hygiene (especially in those with poor oral care already), loss of work time, and residual temporomandibular joint dysfunction. In addition, the not insignificant risks of MMF in epileptics, or those with associated head injuries, drug abusers, and psychiatric patients, can be avoided. In some cases of subcondylar fractures (particularly bilateral ones), and in cases of severe comminution and/or bone loss, MMF must be retained for a time post-operatively. But even in these instances, the time is less than that which would be required with less rigid methods of fixation.

Most surgeons were initially wary of plate fixation and its attendant necessity for increased periosteal stripping. It was assumed that the risk of infection would be significantly increased over traditional methods. This has proven not to be the case, however. A



FIGURE 7. Intra-oral exposure of mandibular angle fracture.



FIGURE 8. The transbuccal stab incision is made with a 15-blade.

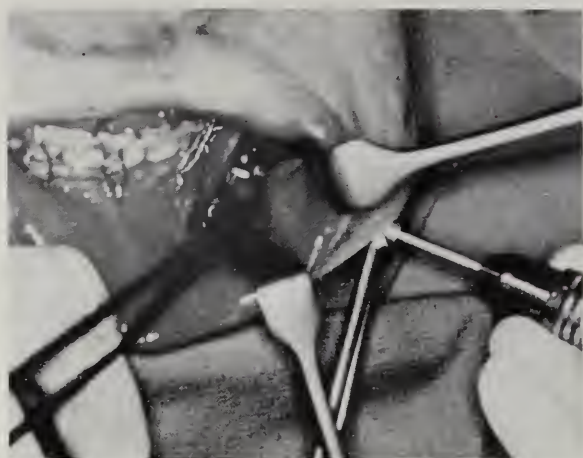


FIGURE 9. Both drilling (A) and screw insertion (B) can be easily performed via the transbuccal stab incision.

number of large series have documented that, if proper technique is followed, rates of infections/osteomyelitis following plate fixation are similar to, or less than, those following fixation by traditional methods.^{1, 3, 6-8} If soft tissue infection does occur with plates in place, they need not be removed. If the plates are not loose, the infection can usually be managed by antibiotics and drainage (this is in fact facilitated by the absence of MMF) until bony healing has occurred. Plates can then be easily removed. There are, in fact, two series which document the successful use of plate fixation in *initially* infected fractures in preference to external fixation.^{9, 10} This last, although very interesting, is not presently the way most surgeons would handle an infected fracture.

CONCLUSION

There has now been more than 15 years experience with plate and screw fixation of mandibular fractures. The most important indications seem well established.^{1, 3, 6} These are (1) displaced, comminuted, or multiple fractures of the dentulous mandible, (2) non-displaced fractures associated with fractures of the condyle (requiring early mobilization), (3) fractures of the edentulous mandible, (4) mandibular fractures in patients with extensive pan-facial trauma, (5) in situations when prolonged MMF is undesirable (epileptics, psychiatric patients, etc.), (6) in the treatment of delayed union or osteomyelitis, and (7) stabilization of bone grafts in injuries with bone defects. In addition the "social" indications of better oral hygiene, better communication,

earlier return to work, etc. have led some to propose plate fixation as the preferred treatment in situations where dental splints and/or MMF alone would be applicable. The development of this new technique offers surgeons an important new tool in the treatment of mandibular fractures.

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ANXIETY AND THE HUMAN FAMILY UNIT: A PERSPECTIVE*

ROBERT H. PAYNE, M.D.**

Anxiety is increasingly regarded as a disease both by the medical profession and by the lay public. Antianxiety drugs are prescribed in tremendous quantities by physicians and non-prescription antianxiety agents such as alcohol continue to be used on a worldwide basis. Anxiety is ubiquitous. It has always been a part of man's existence and no doubt will continue to be despite ongoing efforts to categorize various types and prescribe it away. It is the purpose of this article to present a broader view of this phenomenon with an emphasis on the human family unit as a system designed by evolutionary forces to contain and manage anxiety generated from internal and external sources.

The focus of this article is on the human family. However, one should keep in mind that anxiety also exists in non-human animals. Certain psychological aspects of anxiety may be peculiar to humans, but on a more basic level physiological arousal identical to human anxiety is present throughout the phylogenetic tree. Among our closest relatives, the non-human primates, it is increasingly evident that similar anxiety management mechanisms to those to be described in this paper, are used by chimpanzee⁴ and gorilla³ social units. Primatologists such as Jane Goodall, Dian Fossey and Franz de Waal have painstakingly documented repeatable, predictable patterns of behavior among both captive and wild study groups of chimps and gorillas which are not different from those observed among human social groups or families.² These observations are consistent with the fact that man is a product of evolution and therefore shares much in common with all non-human life on this planet.

The theoretical constructs described in this paper were developed by Murray Bowen, M.D., Clinical Professor of Psychiatry at the Georgetown University Medical School. Dr. Bowen developed the theory during his tenure at the Menninger Clinic and at NIMH in the 1950s. Due to space limitations, this article will, by necessity, concentrate on some aspects of the complete theory while avoiding others.

Webster's dictionary defines anxiety as: (1) an experience of strong or dominating blend of uncertainty, agitation or dread and brooding fear about some contingency; a strong concern or desire mixed with fear and doubt for some event or issue; (2) an abnormal and overwhelming sense of apprehension and fear often marked by physical symptoms like tremor, sweating, palpitations and rapid pulse; an unpleasant feeling of helplessness and isolation accompanied by physiological manifestations consciously explained by a fear of death, pain or unknown catastrophe but without objective justification and explained on an unconscious level by repression of libidinal expression resulting from parental apprehension and rejection.

Webster's offering is too cumbersome to use as a working clinical definition. A more succinct, yet accurate description would read as follows: anxiety is the physiological and behavioral reaction of an organism to a real or imagined stress or threat. An example of a real threat would be the approach of a hurricane toward one's town or city; an imagined threat would be that experienced when dreaming of a hurricane's approach or when thinking what might happen prior to giving a speech. Much of the anxiety present in the industrialized world is from imagined stress. Imagined and real stress evoke the same response on an organismic level. The reaction may differ only in degree.

A real stress/threat corresponds to "acute anxiety" which is time-limited and is there-

*From the Charleston Family Center and the Center for Family Theory and Therapy, Charleston.

**Address correspondence to Dr. Payne at 44-B Folly Road, Charleston, S. C. 29407.

fore managed by the human without the use of chronic compensatory mechanisms. Imagined stress/threats are usually part of a chronic anxiety component in which every individual engages to some extent. As long as there is "light at the end of the tunnel," human capacity to adapt to the threat does not appear to be impaired. If, however, there is no end in sight, the acute anxiety merges into chronic anxiety which does impede flexibility/adaptability. Chronic anxiety triggers compensatory mechanisms to "bind the anxiety," most of which are out of awareness. These mechanisms include such traits or behaviors as obsessiveness, denial, projection, hyperactivity, hypoactivity, as well as emotional attachment to belief systems, alcohol or other drug use, overeating or undereating, fantasy including paranoid thought process and a host of other psychological mechanisms.⁵ In a large percentage of people, chronic anxiety somehow is bound or contained within particular organ systems. It is probable that this tendency contains both genetic and learned components. It is not known why one individual or family develops digestive system disease while another is programmed toward circulatory or immune system impairment. What is clear however, is that a connection exists between chronic anxiety and the development of a particular set of physical symptoms. The same connection exists through different pathways for emotional illness (i.e. depression, phobias), or social acting-out illnesses (i.e. drug abuse, criminal behavior, etc.), as well. If a substantial amount of chronic anxiety is contained within a particular organ or organ system, symptoms can be of low intensity smoldering for months or years and emerge as an emergency in the face of acute anxiety. Examples abound in every family, or members whose chronic illness becomes severe and/or fatal following a few days or weeks of increased anxiety. The stress which precipitates the increase could have originated within the family of the vulnerable member or external to that family. The 1989 death of the commissioner of baseball from heart disease would be an example of this process at work. Several factors contributed to the development of his disease but his death fol-

lowed closely on the heels of a particularly stressful occupational dilemma (the Pete Rose controversy).

Anxiety is managed by individuals but more importantly, it is managed by families. Anxiety is "catching," that is, it spreads from one person to another through sensory modalities. This process is especially active among members of a family. Anxiety within a family travels through established pathways and often tends to agglutinate or accumulate in a particular individual. To the degree that this occurs, flexibility/adaptability is decreased for that individual. The mechanisms by which this occurs are observable in all families. They include spousal accommodation, projection of anxiety to a child, marital conflict (here the anxiety is bound within the spousal relationship), and creation of emotional distance.

Overaccommodation by one spouse represents that spouse's effort to maintain comfort in the marriage by adopting thinking and behavior to suit the other spouse. While some degree of this behavior probably exists in most marriages, it is a major method of anxiety management in some families. Conflict is avoided and both spouses can be relatively comfortable in this arrangement since both are repeating a familiar pattern from their respective families of origin. If the anxiety to be managed by the couple reaches a critical point for them (i.e., exceeds their ability to maintain equilibrium), the one who has sacrificed the most by accommodating to the other partner will develop symptoms of some type of illness, (physical, emotional, or social). In time if the anxiety level lessens, the symptoms may resolve or if the anxiety level remains above the critical point for the family, the symptom or symptoms may become chronic, subject to flareups over time but always present to some degree.

The second mechanism previously referred to is the shifting (projecting) of anxiety from the parental relationship to a child. This is present in every family to some extent and in some more than others. Many factors influence the intensity and direction of this process. Some mothers are quite anxious about their baby even before the birth, while others

are not because of who they are and also because of the quality of their relationships with their husband and extended family (parents, grandparents, uncles, aunts, cousins). The overanxious mother relays a certain amount of her anxiety to her child through sensory modalities. The child is affected by this anxiety and exhibits this effect by well-known baby behaviors which indicate infant discomfort. The anxious mother, unaware of how her anxiety affects the infant, sees the problem as originating in the child and focuses on the child even more. The developing child learns to initiate this process when it is anxious so that mother's attentive focus can be brought on by the child or the mother. Thus patterns are laid down that will come to characterize that particular mother-child relationship. Less anxious parents relay less anxiety to their child or children and are better able to objectively assess the status of the child at any given time. Less anxious parents are also more able to distinguish what effect his or her condition is having on a child. In a sense, anxious parents create anxious children although usually one child is on the receiving end of more parental anxiety than his or her siblings. Factors which influence which child vary from family to family but include birth order, sex, physical appearance, or the presence of a physical handicap. Since this process is for the most part out of the parents' awareness, they are often truly puzzled as to how a particular child became nervous, shy, etc. The father can increase, decrease, or have very little effect on this process depending on how he maintains a presence in the mother-child relationship. The husband can blunt this process by maintaining a close relationship with the wife (i.e. not distancing) and by serving as a potentially more objective party in the day to day thinking, feeling process between mother and child. All too often, unfortunately, the father operates at a not-so-discreet distance from the mother-child two-some and follows the mother's lead in how a particular child is viewed.

The third way by which anxiety may be handled by a married pair is through verbal (and times physical) fighting. Here each spouse is focused on the other and blames

and/or attacks when differences arise. Neither is particularly inclined toward self-responsibility. Rather, each is more interested in what the other is or is not doing. There is little if any accommodating in couples inclined toward this method of anxiety management; often neither is willing to give an inch. When and if things calm down, the couple is often intensely loving and affectionate toward one another. This anxiety management mechanism occurs more often when two oldest or functionally oldest siblings marry, both of whom think they know best.

A fourth interfamily method of anxiety management which is present in all marriages to some degree is emotional distance. Intrapyschic processes are used here by the marital pair to back off from one another when anxiety rises. Typically one spouse (A) will be more anxious, seek comfort from the other (B) only to experience that spouse as emotionally unavailable. A will then frequently move toward B more intensely and B again seeks relief by moving away. If and when A calms down, B will feel comfortable moving back toward A. This cycle may repeat with varying frequency over time. If, however, it is a major method of anxiety management for the couple, and anxiety remains relatively high, the marital pair often find themselves isolated from each other, both having lost the alive connection originally present in the marriage. This, of course, leaves them both more vulnerable to extra-familial emotional involvement. This process mimics on a multicellular organismic level what is easily observed in any single cell organism, which will, when threatened by a chemically or physically toxic stimulus, move away from the stimulus.

These four mechanisms by which a nuclear family (father, mother, children) circulate anxiety should not be judged as good or bad; they exist as a mixture in most families. These processes are most easily seen by the observer when one or two mechanisms are used exclusively in one family and when the family anxiety level is high. As mentioned at the beginning of the paper, there are certainly individually-based coping mechanisms as well.

The focus of this paper, however, has been on people who are intimately connected to each other through the emotional bonds of a family. These processes operate for the most part out of the awareness of family members and manifest themselves generation after generation. Perhaps there is a genetic underpinning to these anxiety-based behaviors. If so it would most likely consist of some very basic force that pushes people to involve themselves with others of their species (to need and be needed) and another counterbalancing force which directs us toward separateness or individuality.⁵ Clearly there would be potential friction as a byproduct of such forces both within an individual and between the two individuals trying to live together. People behave as if they possess motivators of this sort on an instinctual level. The specific ways anxiety then gets channeled by the family

over generations are probably learned and become genetic-like in their fixedness. It is possible, however, to modify the patterns through a long-term effort aimed at increasing one's knowledge of how these patterns operate in one's own family and oneself. With new knowledge, opportunities exist for more thoughtful approaches rather than automatic reactive behavior holding sway. □

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Editorial

HIV, SURGEONS, AND . . . ALL OF US

Most of the fast-breaking stories of the AIDS/HIV epidemic first surfaced in the CDC's *Morbidity and Mortality Weekly Reports*. Three such stories hold special significance for physicians . . . and everyone else.

First was the back-page story of June 5, 1981 that five gay men in Los Angeles had developed pneumonia due to *Pneumocystis carinii*.¹ This brief report foretold the great pandemic of our times.

Second was the lead story of May 22, 1987 that three health care workers developed HIV infection after contact with patients' blood in the absence of percutaneous injury.² The clarion sounded for universal precautions—the need to regard all blood and body fluids as being potentially infectious. To put it bluntly, we have a right to be afraid of all patients.

Third was the report of July 27, 1990 that a patient apparently became HIV-infected during the extraction of two maxillary third molars by a dentist with AIDS. We have had time neither to digest the significance of this report nor to realize its impact.³ But—to put it bluntly—do patients have a right to be afraid of all of us?

Let us examine these separate concerns: (1) the risk of HIV-positive patients to health care workers; (2) the risk of HIV-positive health care workers to patients.

RISK OF HIV-POSITIVE PATIENTS TO HEALTH CARE WORKERS

Exposures to patients' blood and body fluids fall into three broad categories (Table 1). All health care workers are potentially vulnerable to each exposure category. Most of the published reports of HIV seroconversion in the health care setting deal with health care workers other than physicians. Still, surgeons are acknowledged to be at special risk, due to the frequency and magnitude of blood exposure in the operating room.

Risks to surgeons: tensions over professional responsibility

In this issue of *The Journal*, Drs. Hebra, Adams, and Holley from the Medical University of South Carolina provide data on HIV-positive patients who underwent surgical procedures at two hospitals in Charleston. Although only two of these patients underwent emergency surgery for trauma, they note that the seroprevalence of HIV is increasing. Hence, all patients undergoing surgery should be considered to be HIV-positive.

Blood exposure is extremely common during surgery. By one estimate, surgeons' gloves are punctured during 25% of procedures, and 10% of these punctures result in skin penetration. In a recent prospective study, 3.5% of operations resulted in puncture wounds or cuts to a surgeon. Risk factors included emergency operation, blood loss greater than 250 ml, and operating room time exceeding one hour.⁴

TABLE 1

CATEGORIES OF EXPOSURES TO BLOOD AND BODY FLUIDS

- | | |
|------|---|
| I. | CONTACT EXPOSURE TO INTACT SKIN AND MUCOUS MEMBRANES
Several anecdotal reports document seroconversion after exposure of mucous membranes or intact skin to the blood or body fluids of HIV-positive persons. However, prospective studies involving more than 900 such exposures have yet to document such a seroconversion. Hence, the risk is considered to be low. |
| II. | NEEDLESTICK EXPOSURES (PERCUTANEOUS INJURIES)
Here, a fresh wound created by a needle or by some other sharp object is contaminated by the blood or body fluids of an HIV-positive person. Prospective studies involving more than 1,000 such exposures thus far indicate a mean risk of seroconversion of approximately 0.4%, or about one in every 250 exposures. The upper 95% confidence interval for this risk is 0.9%, or about one in every 110 exposures. |
| III. | MASSIVE EXPOSURES
Blood transfusion from an HIV-positive donor virtually assures that infection and seroconversion will occur. The same may be true of freak accidents causing the injection of blood into tissues. These usually occur during the course of a complicated procedure, such as a resuscitation. |

The risk to a surgeon will depend on the kinds of procedures and on the prevalence of HIV in the population served. A nationwide study of selected hospitals indicates the range of HIV seroprevalence to be 0.1% to 7.8% of all patients; at one of the sentinel hospitals, 22% of all men between ages 25 and 44 were positive.⁵ What is the cumulative risk of a surgeon's acquiring HIV over the course of a career?

Assume that a surgeon performs 360 operative procedures each year, or some 10,000 procedures over a 30-year career. By one estimate, the surgeon's cumulative risk of acquiring HIV is 0.1% if the seroprevalence of HIV in the population served is 0.1% (i.e., one in a thousand), but rises to 10% if the seroprevalence of HIV is 10%.⁶ In another study, the cumulative risk was concluded to exceed 6% for 10% of the surgeons surveyed.⁷ One may quarrel with the assumptions, but the message is clear: the risk to surgeons (and to other health care workers involved in invasive procedures) must be taken seriously.

Are surgeons morally obligated to perform procedures within their realms of competence on HIV-positive patients? An adequate airing of this issue far exceeds the scope of this editorial. Some argue that our medical heritage dictates that all of us must perform procedures within our competence irrespective of patients' HIV-antibody status.⁸ However, closer scrutiny of medical history fails to support this assertion.⁹

The issue has received an ample airing at San Francisco General Hospital due to that institution's high seroprevalence of HIV infection. Tensions arose over the issue of professional responsibility. The chief of medicine held that physicians have the obligation to provide care to HIV-infected patients within their realms of competence. The chief of surgery held that staff surgeons reluctant to perform elective procedures on these patients could be relieved, to a large extent, of such responsibilities.

These positions reflect different frameworks for ethics: the categorical model (chief of medicine) versus the contractual model (chief of surgery).¹⁰ Who is to say which is right? I feel strongly about one point: non-surgeons (that is, both physicians who do not perform surgery and also the public) should

not legislate to surgeons on these matters. What matters are the policies and perspectives of those who play the game—not of the spectators. But all of us should encourage reasoned dialogue, for we all have a stake in the conclusions.

Prophylactic AZT (zidovudine; Retrovir): what should be our current practice?

Dr. Hebra and colleagues allude briefly to the use of AZT to prevent HIV infection following exposure. This topic is highly controversial. *Prophylactic AZT has not been shown to be effective, nor is the long-term toxicity of AZT well-defined.* However, an increasingly widespread body of opinion supports making AZT available in certain circumstances. We should therefore be aware of the rationale and limitations of this non-FDA-approved indication for AZT.¹¹

Unfortunately, AZT will not prevent HIV from binding to and entering target cells, such as the helper (T4 or CD4) lymphocyte. AZT inhibits reverse transcriptase, the enzyme enabling the virus to make a DNA copy of its RNA genome and thus enter the host cell's chromosome. Based on this limitation and also on lessons from animal models of retroviral infection, we must assume that *AZT must be given promptly—almost immediately—if it is to be truly effective and prevent HIV from entering the host cell's DNA.* It is also intuitively apparent that we must continue AZT for a relatively long time—for example, for four to six weeks. However, the optimum dose and duration of AZT prophylactic therapy are unknown.

Wholesale use of prophylactic AZT should be discouraged. Such therapy clearly represents an unproven halfway technology. *However, procedures for prompt institution of prophylactic AZT should be available in order to deal with the problem of "massive" or "deep" exposure of anyone to the blood or body fluids of a known HIV-positive person.*

The pros and cons of prophylactic AZT have been aired in an official statement by the Public Health Service.¹² At each institution, the issues should be discussed and guidelines formulated.¹³ My own recommendations are summarized in Table 2. At the time of this writing, various agencies and institutions

(including DHEC and MUSC) are completing formal policies on this matter. One can expect some variation from one policy to the next. However, *there is basic agreement that AZT must be given as soon as possible—ideally within an hour.* My recommendations take into account the theoretical desirability of a loading dose. Informed consent should be obtained. Pregnancy should be excluded since AZT readily crosses the placenta.¹⁴

I recommend a “starter kit” of 41 capsules (i.e., AZT 100 mg caps, #41, sig: V at once, then II q4h for three days). This allows time for the exposed person to review exactly what happened, to study the issues, to seek opinions, and to decide for himself/herself under less urgent circumstances. The duration of treatment remains arbitrary. Both 28- and 42-day regimens have been proposed at major institutions. Follow-up testing of HIV antibody status should be determined at six weeks, three months, six months, nine months, and 12 months after the exposure.

Who will pay for it? Each institution should address this issue. The cost to the pharmacy for the 41-capsule starter kit is about \$50. A compromise solution would be for hospitals to offer the starter kit as an employee benefit, and then to share the remaining cost with the exposed person. Cost-sharing would discourage overuse of prophylactic AZT, which otherwise might occur inevitably. The cost issue should not deter making AZT available in settings where exposure is likely to occur—such as emergency rooms or operating rooms.

We will probably never know the true efficacy of prophylactic post-exposure AZT therapy. Adequate, appropriately controlled prospective studies now seem unlikely. Already, one failure has been reported.¹⁵ However, the benefits of AZT would outweigh the risks if the efficacy were only three to eight percent—provided the exposure is to HIV-positive blood and therapy is begun promptly.¹⁶

In summary, AZT is being widely recommended for massive or deep exposures to known HIV-positive blood or body fluids, but it must be given promptly after the exposure. Therefore, it behooves all of us to be familiar with the issues and to be prepared to act promptly.

TABLE 2

**POST-EXPOSURE AZT PROPHYLAXIS:
ONE PERSON'S RECOMMENDATIONS**

- I. DEFINE THE SOURCE
 - A. *Known HIV-positive or in high-risk category:* Consider AZT prophylaxis depending on nature of the exposure.
 - B. *Low-risk category or unknown:* Discourage AZT prophylaxis in most instances.
- II. DEFINE THE EXPOSURE
 - A. *Massive* (e.g., injection of blood known or likely to be HIV-positive): Strongly recommend AZT.
 - B. *Deep* (e.g., deep needlestick puncture wound, definitely contaminated with blood likely to be HIV-positive): Recommend AZT.
 - C. *Penetrating, but not deep* (e.g., superficial puncture wound or scratch, possibly contaminated with blood likely to be HIV-positive): Offer AZT but advise that the case for its use is weak.
 - D. *Superficial* (including all contact exposures with the exception of massive blood splash onto mucous membranes): Discourage the use of AZT.
- III. EXCLUDE PREGNANCY (RAPID PREGNANCY TEST, PREGNANCY IS A POSSIBILITY)
- IV. INITIAL AZT THERAPY, WHEN INDICATED*
 - A. 500 mg of AZT stat.
 - B. Draw baseline complete blood count, serum creatinine, SGOT, CPK, and HIV antibody test.
 - C. Continue 200 mg of AZT every 4 hours (around the clock) for three days.
- V. RE-EVALUATE THE NEED FOR POST-EXPOSURE PROPHYLAXIS
 - A. Encourage perusal of relevant literature.
 - B. Determine the HIV antibody status of the blood source, if not previously known.
- VI. ADMINISTER AZT FOR 25 ADDITIONAL DAYS, FOR TOTAL OF 28 DAYS' THERAPY*
 - A. Dose: 200 mg every 4 hours while awake (1000 mg daily).
 - B. Monitoring: Symptoms, complete blood count, serum creatinine weekly.

*Some alternative dosing regimens: 200 mg every 4 hours for 28 days skipping the 4 AM dose; 200 mg every 4 hours for 42 days.

RISKS OF HIV-POSITIVE HEALTH CARE WORKERS TO PATIENTS

Informally, it has been estimated that as many as 5,000 physicians in the United States may be HIV-infected. Should these physicians be limited in their practice in any way, and do their patients have a right to know?

Prior to July 27, 1990, one could hold these questions to be mainly of theoretical interest, since transmission of HIV from a health care worker to a patient had not occurred. Now, it seems to have happened. Seroconversion was not demonstrated in the dental patient, since a baseline HIV antibody test was not performed. However, the circumstances were suggestive and the viral isolates from the dentist and the patient were quite similar. It seems best to assume that it can happen, and that it *did* happen.

Despite this report, other data are reassuring. Almost simultaneously, an experience was reported in which a surgeon with AIDS had operated on 2160 patients, of whom 1652 were contacted and 616 tested. Only one of these patients was HIV-positive, and that person was an IV drug abuser. It was concluded that "the risks to patients operated on by HIV-infected surgeons are most likely quite low."¹⁷ Assessing these data, an editorialist concluded that HIV-infected surgeons should avoid procedures that are especially high-risk, such as oral surgery, vaginal hysterectomy, and other procedures that require blind, by-feel manipulation of sharp instruments.¹⁸ Otherwise, surgery by an HIV-positive surgeon could be carried out as business-as-usual.

The issues include:

*Does the patient's right-to-know the potential risk—however small that risk may be—outweigh the surgeon's right to confidentiality?

*Should all health care workers, including physicians, be tested for HIV antibodies?

*Should HIV-positive physicians be actively discouraged from performing certain procedures and, if so, how should their activities be monitored? Already, it has been noted: "If our profession does not effectively grapple with such questions, they will be answered for us in the courts."¹⁹

The physician-patient interaction carries some inherent risks; it always has, and it always will. With blood-borne diseases such as HIV and hepatitis B, the risks to physicians and other health care workers far exceed the risks to patients. Still, the AIDS/HIV epidemic poses unprecedented, emotionally charged dilemmas to which organized medicine must respond. In Table 3,

I have outlined for the sake of discussion some possible agenda items. But the important point is this: we must remain in dialogue both with each other and with the public. We must be as rational as possible in a time of tremendous uncertainty.

—CSB

TABLE 3

WHAT WE MIGHT DO: SOME PROPOSALS

1. Propose Federal legislation to create a national insurance policy on the lives and careers of persons who have been convincingly shown to have acquired HIV infection while rendering medical care or emergency aid to another person.
2. Support the funding not only of vaccine development against HIV but also of better approaches to post-exposure prophylaxis (e.g., combinations of AZT with other agents such as soluble CD4 or monoclonal antibodies).
3. Establish an ethical standard that physicians and other health care workers belonging to one or another risk category to HIV infection should be tested for HIV antibodies—voluntarily and confidentially.
4. Establish an ethical standard that physicians and other health care workers who are HIV-positive should seek consultation and ongoing follow-up with a physician knowledgeable about HIV infection, and that such follow-up should include advice about the range of their activities.
5. Endorse universal precautions as a standard of medical care.

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Letter to the Editor

ERRATUM

To the Editor:

I am writing in regards to an error in an article that was recently published in *The Journal*. This article was co-authored by Dr. Maire Hakala and myself and is entitled, "Calcium Leucovorin and 5-Fluorouridine Cytotoxicity." It appears in volume 86 of *The Journal* and is contained within pages 284 to 289. I would like to alter the research site from the University of South Carolina, Columbia, SC to Roswell Park Memorial Institute, Buffalo, NY. All reprint requests should be sent to me at the University of South Carolina since the co-author, Dr. Hakala, is retired.

SONDRA H. BERGER, Ph.D.
Department of Basic
Pharmaceutical Sciences
College of Pharmacy
University of South Carolina
Columbia, SC 29208

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On the Cover:

ARMAMENTARIUM CHIRURGICUM

Our cover this month features a page from the *American Armamentarium Chirurgicum*, a surgical supply catalog from George Tiemann and Company, published in 1889. George Tiemann (1793-1868), a German cutler, emigrated to New York in 1826, and soon thereafter opened his shop in lower Manhattan. His proximity to the growing medical community (New York Hospital, the College of Physicians and Surgeons [later to become the Medical Department of Columbia University], and the Medical Department of the University of New York were all within walking distance) almost surely provided the impetus for the change from cutlery to surgical instruments. With the discovery of anesthesia in the 1840s and hemostasis and antisepsis in the 1860s, surgery had become increasingly invasive. This, added to the rise in specialization in the 1820s, called for better and more highly specialized instruments. This demand was met

through the cooperation of surgeon and instrument maker. Prominent surgeons of the day had their "personal" instrument makers who were often present in surgery so that they could better design instruments for specific procedures. Although it was considered unethical for physicians to patent any new or innovative designs, this did not hold true for instrument makers, and George Tiemann held several patents on his instruments.

The *Armamentarium* is considered the apex of surgical supply catalogues both for its almost complete selection of instruments available at the time and for the innovative format. Tiemann used excerpts from published works on surgery to describe and explain the uses of the instruments found in the catalogue. The *Armamentarium* was republished in facsimile in 1989, and is now available to collectors and medical historians.

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COCAINE IN PREGNANCY: CONFRONTING THE PROBLEM*

EDGAR O. HORGER, III, M.D.**
SHIRLEY B. BROWN, R.N., M.N.
CHARLES MOLONY CONDON

Cocaine has become more popular than every recreational drug but alcohol.¹ This popularity has spread through all groups, including the obstetric population, and it is estimated that 10% or more of all infants have been exposed to cocaine in utero.² The use of cocaine now crosses all racial, ethnic, and socioeconomic bounds. A recent study conducted by the National Association for Perinatal Addiction Research and Education (NAPARE) found similar rates of drug use when comparing patients from public clinics with those from the private sector and when black women were compared with white women.³

The extent of cocaine use in South Carolina is unknown but appears to have increased significantly in recent years. The South Carolina Commission on Alcohol and Drug Abuse reported a greater than seven-fold rise in the percentage of all drug arrests related to cocaine between 1980 and 1988 and a greater than 22-fold rise in the percentage of drug-related hospitalizations due to cocaine.⁴ A study

has been proposed by the South Carolina Department of Health and Environmental Control (DHEC) to determine the frequency of drug use among pregnant women in South Carolina.

Deleterious effects of cocaine on pregnancy and the infant are well documented.⁵⁻¹⁰ General health problems include malnutrition, anemia, hepatitis, AIDS, and other sexually transmitted diseases. Spontaneous abortion rates are increased 2½ to 3-fold and reach 38-46% in some series.⁵ The incidence of preterm labor and delivery is increased in every report. The rate of intrauterine fetal growth retardation is 2 to 4-fold higher in cocaine pregnancies.^{6, 7, 10} Abruptio placentae poses an extreme problem in cocaine abusers. While the incidence of abruptio placentae is less than 1% in the general obstetric population, this rate may reach 15% in cocaine abusers.¹¹ These placental abruptions commonly lead to stillbirth. It must be emphasized that any of these problems of pregnancy wastage—abortion, preterm labor, abruptio placentae, or fetal death—may occur immediately after a single use of cocaine.

Neonatal problems resulting from maternal cocaine are somewhat less well defined. Increased rates of anomalies of the genitourinary tract¹² and heart⁹ have been reported. Many neonates will show withdrawal symptoms and poor feeding.⁵ Abnormal electroen-

*From the Departments of Obstetrics and Gynecology (Dr. Horger) and Pediatrics (Ms. Brown), Medical University of South Carolina, Charleston, S. C., and the Ninth Judicial Circuit, State of South Carolina (Mr. Condon).

**Address correspondence to Dr. Horger at the Department of Obstetrics and Gynecology, Two Richland Medical Park, Columbia, S. C. 29203.

cephalograms and perinatal cerebral infarction have been seen.¹³ Many studies have documented disordered neurobehavioral development.⁵ Sudden infant death syndrome has occurred far more commonly in infants of cocaine-abusing mothers.¹

MEDICAL UNIVERSITY HOSPITAL EXPERIENCE

An increasing incidence of perinatal outcome parameters suggesting maternal cocaine abuse was recognized at the Medical University Hospital in 1988. Urine drug screens (UDS) were done beginning October 1, 1988 in pregnancies whose clinical manifestations suggested cocaine. The great majority of these early drug screens were ordered because of the very poor perinatal outcomes of abruptio placentae or intrauterine fetal death although an occasional test was done to investigate preterm labor or previously known drug or alcohol abuse. Beginning April 1, 1989 a protocol was adopted requiring UDS for any of six clinical indicators:

1. No prenatal care
2. Abruptio placentae
3. Intrauterine fetal death
4. Preterm labor
5. Intrauterine growth retardation
6. Previously known drug or alcohol abuse

Figure 1 shows the rising incidence of positive cocaine tests during the first 12 months of this investigation during which UDS positive for cocaine was found in 119 cases.

The great majority of the patients with positive UDS delivered at a time proximate to the urine collection. Only 15 patients continued pregnant subsequent to a positive UDS. Each of these patients was counseled thoroughly by the Obstetric Case Manager (SBB) and by a hospital social worker regarding cocaine risks to the pregnancy; most were counseled also by the obstetrician. Follow-up care through the Charleston County Substance Abuse Clinic was urged for every case identified. Each of the 15 undelivered patients had appropriate appointments arranged for antepartum care and Substance Abuse Clinic. Only one of these patients kept one appointment to the Prenatal Clinic, and no patient

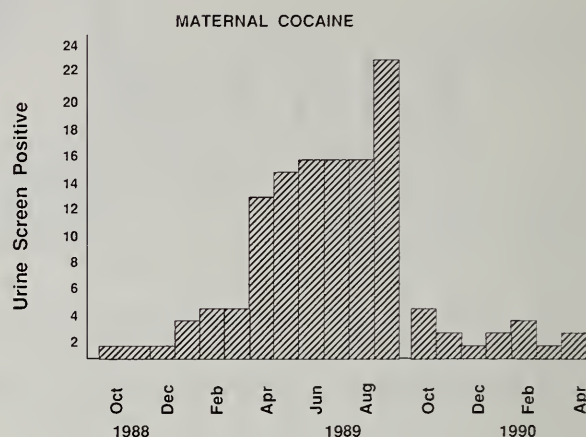


FIGURE 1. Incidence of urine drug screens positive for cocaine in obstetric patients prior to and after initiation of screening protocol.

kept her appointment to the Substance Abuse Clinic. Each of these patients was seen next when she returned to the Medical University Hospital in preterm labor once again; each once again had urine positive for cocaine.

Every patient who had already delivered was counseled by the Obstetric Case Manager and by a hospital social worker regarding the risks to personal health of continued cocaine abuse. Each of the delivered patients refused appointment to Substance Abuse Clinic. Referral was made to the Department of Social Services Child Protective Services in every case.

PROSPECTIVE MANAGEMENT PROTOCOL

Because of the apparent increasing frequency of cocaine abuse and the unsuccessful results of our counselling, in October 1989 the obstetric service of the Medical University Hospital adopted a protocol of management with the cooperation of the Solicitor of the Ninth Judicial Circuit and the City of Charleston Police Department. This protocol was designed to further our efforts to educate the obstetric population regarding the hazards of cocaine. At the first prenatal visit or initial hospitalization, each patient is to view a videotape regarding harmful effects of cocaine, alcohol, tobacco, and other drugs. A written statement is presented regarding the harmful effects of illegal drugs, the availability of counselling and treatment for drug abuse, and

the possible need for legal action to protect the unborn child. A statement then is signed by each patient attesting that she has received such counselling.

Indications for UDS were expanded. UDS was performed for each of the following risk factors:

1. No prenatal care
2. Late prenatal care (registration after 24 weeks' gestation)
3. Incomplete prenatal care (non-compliance)
4. Abruptio placentae
5. Intrauterine fetal death
6. Preterm labor (of no obvious cause)
7. Intrauterine growth retardation (of no obvious cause)
8. Known alcohol or drug abuse
9. Congenital anomalies

If a positive drug screen is identified during pregnancy, regardless of whether or not previous counselling has occurred, the videotape is viewed, the written statement presented, and the patient attestation completed. The Obstetric Case Manager is notified of every positive UDS. She counsels the pregnant woman about risks of cocaine to both her and her fetus and coordinates further counselling and appointments. Appointments are arranged for Substance Abuse Clinic and prenatal care. The patient is presented with a written statement from the Solicitor stressing the opportunity for rehabilitation by follow-up care and the likelihood of arrest and prosecution if the appointments for care are broken or continued drug use is identified. These patients are advised that they will be subject to random drug testing through the remainder of pregnancy. If any appointment to Substance Abuse Clinic or prenatal clinic is not kept or if any repeat UDS is positive, the City of

Charleston Police Department is notified, and the patient is arrested and charged with possession of the illegal drug under S. C. Code 44-53-370.

Any patient whose UDS is positive at the time of delivery or whose infant's drug tests are positive is given written statements of the harmful effects of drug abuse from the viewpoint of both obstetrics and neonatology. A referral is made to the Department of Social Services (DSS) for investigation regarding the home situation and the best interests of child custody. Arrangements are made for the patient to receive substance abuse counselling. A letter from the Office of the Solicitor also is presented in which it is emphasized that the patient is being provided the opportunity for rehabilitation which will circumvent arrest. It is further emphasized that failure to complete substance abuse counselling, failure to cooperate with DSS, or any further positive UDS will result in arrest and prosecution.

A conference is held monthly for review of the protocol and each identified case of drug abuse. This conference includes the Obstetric Case Manager, hospital social workers, obstetricians, pediatricians, and representatives of the Office of the Solicitor, the Charleston County Substance Abuse Clinic, DSS, and DHEC.

PROTOCOL RESULTS

The incidence of positive tests for cocaine is shown in Figure 1. A marked rise was noted in the frequency of positive tests in the 12 months prior to initiation of the management protocol. One hundred nineteen patients had UDS positive for cocaine, and these patients were more likely to have inadequate prenatal care and preterm delivery (Table 1). Twenty-five percent of these patients received no pre-

TABLE 1
Adequacy of Prenatal Care, Timing of Delivery, Incidence of Positive UDS at Delivery, and Perinatal Death Rate in Cocaine-Positive Pregnancies and General Obstetric Population

	<i>cocaine-positive</i>		<i>controls</i>		<i>p</i>
	<i>n</i>	%	<i>n</i>	%	
No prenatal care	30/119	25.2	71/3708	1.9	<0.001
Inadequate prenatal care	27/89	30.3	772/3637	21.2	<0.05
UDS positive at delivery/abortion	68/119	57.1	—	—	—
Abortion at ≤20 weeks	10/119	8.4	—	—	—
Delivery at ≤36 weeks	19/109	17.4	411/3708	11.1	<0.05
Perinatal death	2/109	1.7	67/3708	1.8	NS

natal care prior to delivery or spontaneous abortion, and 30% of the remaining 89 patients had inadequate care, according to Kessler's index.¹⁴ The rate of no prenatal care or inadequate care in the general obstetric population at the Medical University Hospital was 23.1% in 1989. UDS was positive at the time of delivery or abortion in 57%. Preterm delivery occurred in 17.4% of these patients; the preterm delivery rate in the general obstetric population was 11.1%. There were only two perinatal deaths in the group. One fetus died in utero at 30 weeks' gestation, and a 630 gram infant died shortly after birth at 23 weeks' gestation.

The number of positive UDS has diminished markedly since initiation of the management protocol in October 1989 despite careful attention to ordering UDS when any of the clinical indicators is present. However, recognition of repeat cocaine abusers has surfaced. Three of the 12 patients with positive UDS during the last four months of study also had positive UDS during pregnancy in 1988. One of these had delivered a very premature infant in 1988 and had complete abruptio placentae and fetal death at term in 1990; UDS was positive for cocaine at the time of each delivery.

During the first three months of this program, positive UDS at the time of delivery resulted in arrest immediately after medical release. Criminal charges in these cases included possession of the illegal drug (S. C. Code 44-53-370) and distribution to a minor (S. C. Code 44-53-440). Ten arrests were made from October 1 through December 31, 1989. Two arrests were made prior to delivery, and eight women were arrested after delivery. The policy was modified in January 1990 to allow avoidance of arrest by successful completion of counselling, and there have been no subsequent arrests.

COMMENT

Although the marked decrease in positive maternal cocaine tests must be due, at least in part, to this medico-legal protocol, other systems may be similarly responsible. Media efforts at public education may play a role in reducing cocaine use. Law enforcement ef-

TABLE 2
Delivery Rates at the Medical University Hospital

	<i>Deliveries, Jan.-Apr.</i>
1988	1168
1989	1154
1990	1216

forts may have achieved some reduction in the availability of cocaine in our area.

Critics of our protocol point out that the threat of legal problems may drive obstetric patients away from health care. Table 2 compares delivery rates at the Medical University Hospital during the first four months of each of the last three years. Delivery rates have remained relatively constant. The Medical University Hospital remains the only facility within at least a 50 mile radius which offers obstetric care for indigent and Medicaid-sponsored patients. Consequently, it is very unlikely that these patients could have delivered in neighboring facilities.

The possibility of home births also was considered. According to data provided by the Division of Biostatistics, Office of Vital Records and Public Health Statistics, DHEC, there were 45 out-of-hospital births in 1988 and 44 in 1989 occurring in Charleston, Dorchester, and Berkeley Counties, combined.

Each of the prenatal or delivered patients who has entered the substance abuse counselling program has completed the program. Although random drug screens have been done in these patients, none have again been positive.

This policy was not designed as a punitive measure, but it was felt necessary to add some teeth to our counselling efforts. The threat of exposure and arrest does appear to be a deterrent to cocaine use. Nonetheless, it must be emphasized strongly that the program goal has been fetal protection, not maternal prosecution.

The current data show that an aggressive approach to combatting the rising problem of cocaine in pregnancy may have merit. The frequency of UDS positive for cocaine has decreased dramatically during the seven months since initiating a testing and management protocol through the joint cooperation

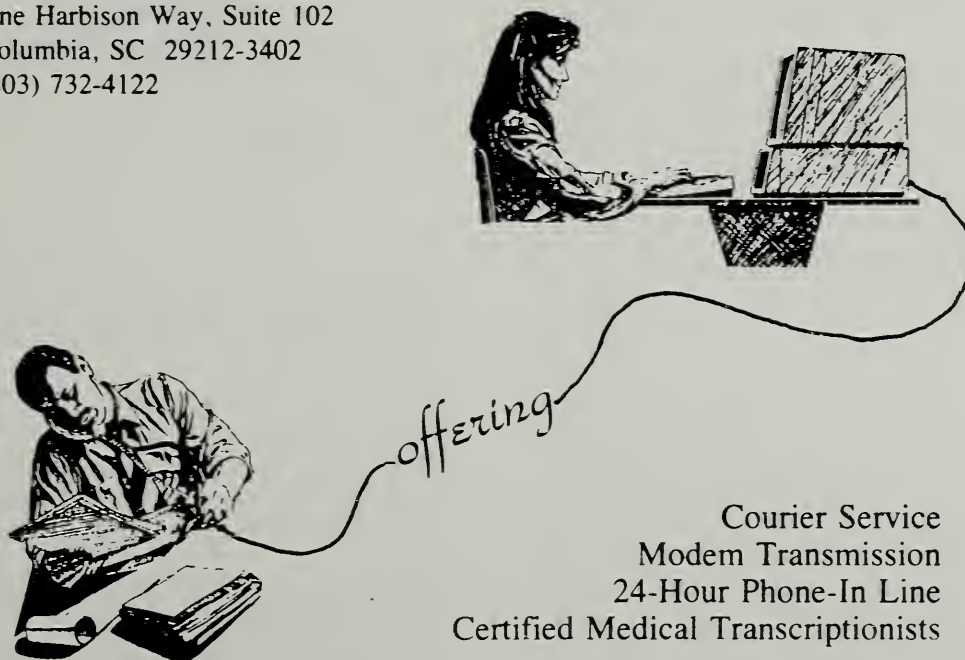
of the Medical University Hospital, the Solicitor of the Ninth Judicial Circuit, and the City of Charleston Police Department. The role of this program in improving perinatal outcome will be reported after 12 months' data collection. This preliminary report is offered to support a combined medical/legal approach to the cocaine problem. □

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COCAINE USE AND EFFECT: A MAJOR PERINATAL RISK FACTOR IN THE NINETEEN NINETIES

SAMI B. ELHASSANI, M.D.*

“For me,” said Sherlock Holmes, “there still remains the cocaine bottle.”

—Sir Arthur Conan Doyle (1859-1930)
The sign of four, “the strange story of Jonathan Small.”

—Since 1985, the rate of admissions to our neonatal intensive care unit has risen from 14 percent of live births to 22 percent—more than three times the national average. A lot of this is due to crack. . . . The system is so overloaded that we can’t handle the babies we are getting anymore.

—From Bateman DA. Harlem Hospital, New York City, quoted in the The New York Times, Feb. 19, 1989.

In the United States, cocaine is one of the most common and certainly the most dangerous illicit drug in use today, with important economic and health care implications in society. Because perinatal cocaine-related disorders constitute particularly large, diverse, and devastating effects on pregnant women, their fetuses and neonates (Fig. 1), this article has been written as an attempt to review the different pharmacological, toxicological, epidemiological and clinical aspects of perinatal cocaine use.

Cocaine is an alkaloid prepared from the leaves of the coca bush (*Erythroxylon coca*), indigenous to Peru and Bolivia, where the leaves have been used for centuries by the natives to increase endurance and promote a sense of well-being. Its earliest known use is dated to 600 A.D.¹ Coca leaves were used for the first time as a medicinal substance in 1596 by a Spanish physician. In 1855, cocaine was isolated from coca leaves, but it was not until 1884 that Freud described its effects on the human body. The dramatic upsurge in the use of cocaine by young affluent adults and young urban professionals occurred in the mid-1970s and by 1980, cocaine was the favorite drug of the middle class. By the mid-1980s, all socioeconomic classes,

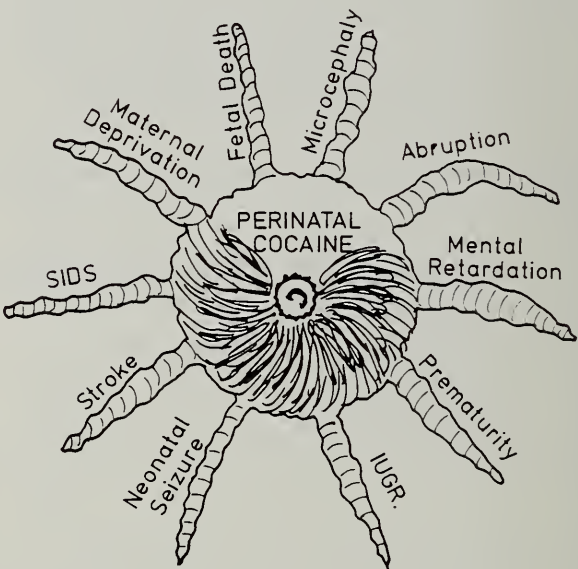


FIGURE 1. The many tentacles of “perinatal cocaine” showing the risks involved with cocaine use during pregnancy.

all races, ages, and sexes were using cocaine in ever-increasing numbers. As we enter the 1990s, cocaine is considered and projected to be one of America’s leading street drugs. Table 1 depicts the history of cocaine use.

BASIC CHEMISTRY, PHARMACOLOGY, AND METABOLISM

Cocaine’s principle ingredient is benzoyl-methylecgonine, an ester of benzoic acid and a nitrogen-containing base. The two forms of

*751 North Church Street, Spartanburg, S. C. 29303.

TABLE 1
March of Cocaine Use

Year	History of cocaine use
600 A.D.	Coca leaves found in the tombs of Indian mummies
1596	First reported medicinal use of coca leaves by a Spanish physician
1855	Cocaine isolated from coca leaves
1884	Freud described the effect of cocaine in humans
1914	Cocaine included in the Harrison act which regulated use of potentially addicting drugs
Mid 1970s	Dramatic upsurge in the use of cocaine by young affluent adults and young urban professionals
1980	Cocaine is the favorite drug of the middle class
Mid 1980s	All socioeconomic classes, races, ages, and sexes using cocaine in ever increasing numbers
Late 1990s	Cocaine is one of America's leading street drugs

cocaine in use in the U. S. today are cocaine hydrochloride—the usual street preparation, and the pure alkaloid base (crack) prepared by adding alkali, such as sodium bicarbonate to cocaine HCL.

The drug enters the body of a human by any one or a combination of the following routes;

1. Intranasally ("snorting")
2. Intravenous, intramuscular, or subcutaneous
3. Orally, sublingually, or rectally
4. Respiratory tract through smoking
5. Placenta to the fetus

The absorption efficiency through all five routes is high. Moreover, the half-life of disappearance is approximately 90 minutes and is independent of the route of administration.² The degree of toxicity of cocaine is affected by such factors as purity of the drug (concentration), variation in distribution, metabolism, and excretion. By a process of simple diffusion, cocaine is readily transferred across the placenta. Enhancing the transfer are the high water and lipid solubility, low molecular weight, and low ionization at physiologic pH.³ In addition, the lower fetal pH favors higher concentrations of cocaine in the fetal circulation.⁴

Because of its ability to block the initiation and conduction of the nerve impulse following local application, cocaine has been used as a local anesthetic. The systemic effects of cocaine are due to the blocking of the presynaptic reuptake of dopamine, norepinephrine and serotonin. After absorption, cocaine is metabolized by plasma and liver cholinesterases to water-soluble compounds that are excreted in the urine.⁵

EPIDEMIOLOGY AND CLINICAL MANIFESTATIONS

About 11% of all American infants—about 375,000—are born each year suffering from the effects of cocaine (From *American Medical News*, Oct. 6, 1989). Moreover, the widespread use of cocaine during pregnancy is also associated with widespread use of other drugs. In a study done in one inner-city hospital, Osterloh and Lee⁶ reported cocaine as the most common drug detectable in the peripartum period, therefore, they recommended urine drug screening be done on both mothers and newborns to confirm the suspicion of drug effect or withdrawal in the newborn. In addition, several routes of neonatal exposure to cocaine have been reported recently, including via breast milk from addicted lactating mothers,⁷ by passive inhalation of freebase "crack" used by their adult caretakers,⁸ and from direct ingestion of cocaine used as a topical anesthetic for nipple soreness.⁹

The typical signs in cocaine-affected infants present little difficulty for diagnosis. Thus, a neonate with a positive maternal history for drug addiction presenting with a disordered neurobehavioral function, prematurity or symmetrical intrauterine growth retardation with or without microcephaly, will usually be easily diagnosed as suffering from cocaine adverse effects. The lack of recognition of "neonatal cocaine effect" can be due to (1) atypical presentation, (2) typical presentation but the diagnosis not made because of lack of lab evidence, and (3) signs of cocaine effect associated with signs of other neonatal diseases. Cocaine use by pregnant women significantly reduces weight of the fetus, increases the stillbirth rate related to abruptio placenta, and is associated with a higher mal-

formation rate.¹⁰ Cocaine exposure has been associated with transient systemic hypertension, bowel ischemia, and cerebral infarction in the neonate.^{11, 12} In addition, intrauterine exposure to the drug decreases cardiac output and stroke volume and increases mean arterial blood pressure in the newborn.¹³

TERATOGENICITY

There is overwhelming evidence in experimental animals and in pregnant women that cocaine can pass through the placenta and is teratogenic to the developing fetus. The predominant malformations and abnormal neurobehavioral findings in prenatally exposed human fetuses to cocaine are microcephaly, growth retardation,^{14, 15} genitourinary tract anomalies¹⁶ (Fig. 2), irritability, tremulousness and deficiency in the ability to interact with others. Of particular note is the increased risk of growth retardation, microcephaly, prematurity and meconium staining in amniotic fluid.¹⁷

A possible explanation for the fetal intrauterine growth retardation is provided from data in experimental studies on animal models showing a reduction in uterine blood flow associated with cocaine administration, thus altering fetal oxygenation by impairing oxygen transfer to the fetus.¹⁸

LABORATORY EVALUATION

The methods used to detect cocaine and cocaine metabolites in urine include thin layer chromatography, gas chromatography mass spectroscopy, radioimmunoassay¹⁹ and enzyme-multiplied immunoassay technique (EMIT).²⁰ While gas chromatography mass spectroscopy is the most reliable in detecting cocaine up to seven days of intake, radioim-



FIGURE 2. Prune-belly syndrome with major genitourinary tract anomalies.

munoassay is the most sensitive method and can detect benzoylecgonine urine concentrations of 2 to 20 ng/ml for four to five days after cocaine use.²¹ The EMIT method is less sensitive than radioimmunoassay and can detect concentrations of 300-1000 ng/ml for up to three days²¹ followed by thin layer chromatography technique considered to be the least sensitive of the screening methods for cocaine because it often fails to detect small quantities of the drug. In addition to blood and urine, cocaine metabolites have been detected in meconium²² and hair.²³ □

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Pulvules[®] 250 mg
cefactor

**Established therapy
for today's patients**

For respiratory tract infections due to susceptible strains of indicated organisms

Brief Summary.

Consult the package literature for prescribing information. **Indication:** Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication: Known allergy to cephalosporins.

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of non-susceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions have been reported with the use of Ceclor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritis/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, serum-sickness-like reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials (with an incidence in children in clinical trials of 0.055%) to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization = two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.
- Stevens-Johnson syndrome, toxic epidermal necrolysis,

and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

Abnormalities in laboratory results of uncertain etiology.

- Slight elevations in hepatic enzymes.
- Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.
- Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Ceclor and Coumadin concomitantly.
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinistest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

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A MODIFICATION OF THE PEG TECHNIQUE*

JOE T. WILLS, M.D.

EUTA M. COLVIN, M.D.

Percutaneous endoscopic gastrostomy (PEG) has been well covered in the literature. The Ponsky and Russell technique have proven successful for many years; however, modifications of these procedures have been cropping up in the literature. This paper is presented as a modification of the previously described techniques which is especially useful for the moderately to severely obese patient.

Performing a PEG on thin patients is rarely complicated. However, the patient with a thick abdominal wall or with loose abdominal wall skin due to rapid weight loss can present problems for the operating team. The main problem encountered is that of cannulating the lumen of the stomach because the needle won't penetrate the stomach wall or the catheter is not long enough to traverse a thick abdominal wall and the stomach wall. Due to these technical difficulties we have begun using a very simple but effective method that decreases operative time as well as the operating team's frustration.

The procedure is performed with adequate sedation and then the endoscope is passed with the stomach being insufflated. An assistant on the right side of the table places manual pressure on the right side of the abdominal wall so that the stomach is forced against the left upper quadrant and the thickness of the abdominal wall is lessened due to com-

pression. An appropriate point for puncture is selected with the lumen being cannulated. The nylon suture is then placed and brought through the mouth in standard fashion. The gastrostomy tube is placed and sutured.

PEG has been proven to be a safe and effective method for placing gastrostomy tubes. As with any procedure, there are certain modifications that are helpful in improving the technique. We have used the above described method for the past six months in our institution and have found it to be useful in decreasing operative time as well as decreasing frustration on the operating team's part. □



*From the Department of Surgery, Spartanburg Regional Medical Center, 101 East Wood Street, Spartanburg, S. C. 29303.

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- 3) Which coverages do you want?
___ Health ___ Life ___ Dental ___ Drug Card ___ Weekly Disability ___ Long Term Disability
- 4) Do any employees have any health problems (diabetes, hypertension, heart attack or cancer)
or has anyone incurred more than \$2,500 in medical bills in the last three years?
___ Yes ___ No Is anyone pregnant? ___
If Yes, who and what type of problem(s). _____

	1	2	3	4	5	6	7
EE #	EMPLOYEE (EE) NAME	SEX M/F	AGE/ DOB	SPOUSE Y/N AGE	# OF CHILDREN	EE CLASS	ANNUAL SALARY
1							
2							
3							
4							
5							
6							
7							

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SCMA

NEWSLETTER

OCTOBER 1990

HIGHLIGHTS OF SEPTEMBER 21, 22 BOARD OF TRUSTEES MEETING

President John W. Simmons, MD, reported that he would serve on a committee which will seek to coordinate a consensus of the Leatherman, Saleeby, SCMA and SCHA recommendations for the future of South Carolina health care.

The board heard a report from representatives of McManis & Associates on the 1990 survey conducted to evaluate the progress of the SCMA since its reorganization several years ago. The board and executive committee are presently considering the actions SCMA should take in response to this evaluation, including the appointment of a Healthcare 2000 Implementation Committee, terms of AMA delegates and SCMA trustees and public relations activities.

Speaker of the House O. Marion Burton, MD, updated board members on plans for the 1991 annual meeting scientific sessions. You are reminded that the meeting will be held at the Omni Hotel in Charleston, April 24-28, 1991. Mark your calendars now.

MEDICARE UPDATE

Bipartisan Budget Summit Deficit Reduction Plan

According to the federal budget agreements in Washington, \$4.85 billion will be cut from the Medicare budget in FY 1991 with a planned savings of \$60.0 billion over the next five years. Beneficiary cost savings would account for \$1.75 billion of this savings in 1991 and \$29.9 billion over the next five years. Beneficiary premiums would be increased so that they pay for 30 percent of the costs of the Part B program instead of the current 25 percent. (When Medicare was implemented, it was planned that beneficiaries would pay for 50 percent of Part B costs.) This increase in beneficiary payment would be the result of increasing the deductible to \$100 in 1991, \$125 in 1992 and \$150 in 1993, and by requiring a 20 percent copayment on clinical lab services.

While no specific agreement was made on how the Part B provider savings would be achieved, the plans center on reducing payments for overpriced procedures, updating primary care services only, reducing payment for overpriced localities, imposing a cap on the technical component of diagnostic tests, extending the payment limit on new physicians, limiting anesthesiology payments to 90 percent and limiting supervised anesthesiology payments,

reforming assistant at surgery payments, and limiting surgical global fee payments.

As this newsletter goes to press, it appears this agreement has been rejected by the House and will be renegotiated.

Congressional Deliberations

The SCMA and AMA are most appreciative that Senator Hollings was the original sponsor of S.3015, which would delay the 125 percent limit on Medicare balance billing until implementation of the RBRVS. The SCMA had written our delegation with information documenting that a 15 percent decrease in many physicians' Medicare reimbursement will occur in January, 1991 as a result of the limit on balance billing charges to 125 percent of the nonparticipating prevailing rate, unless Congress acts to correct the provision of last year's Omnibus Reconciliation Budget Act.

New proposals have arisen in Washington which organized medicine is seeking to address, such as triplicate prescriptions; a requirement that physicians must distribute living will forms; expenditure targets; a \$1.00 fee for every claim filed non-electronically; and a 95 percent payment differential for non-board certified physicians. In addition, work continues on the onerous CLIA 88 proposed regulations.

Comparative Performance Report Program

The Omnibus Budget Reconciliation Act of 1989 requires carriers to "monitor and profile physicians' billing patterns within each area or locality and provide comparative data to physicians whose utilization patterns vary significantly from other physicians in the same payment area or locality."

The Comparative Performance Report Program is an informational effort to alert physicians who have billed Medicare for any unusually large number of services or procedures in comparison to their peers. This fall, Medicare will be sending these reports to physicians selected to receive them through the analysis of postpayment claims data for the most recent six-month period available. If it appears that a physician's selection was the result of an incorrect specialty listing, Medicare will contact the physician to confirm that their file contains the correct listing before sending a report.

The information sent should allow physicians to conduct an independent assessment of the appropriateness of their coding, billing and utilization practices. If you receive a Comparative Performance Report, you are encouraged to contact Medicare to discuss it. You are not required to make a response, but you may find it useful as a starting point from which to analyze your billing and practice patterns. Call Medicare at 754-1968 (extension 5495) in Columbia. If you receive a profile and have any concerns or suggestions, inform Barbara Whittaker at the

SCMA.

Publication of Preliminary RBRVS Fee Schedule

On September 4, HCFA published a "very preliminary" model RBRVS fee schedule. The federal notice includes an interesting discussion of various issues yet to be addressed, but the RBRVS calculations comprise the largest portion of the notice. They include, by procedure code, an estimate of the Work Relative Value Unit, Overhead RVU, and Malpractice RVU; and, by carrier, the geographic practice cost adjustment for the work, overhead and malpractice RVUs.

Estimated payment amounts for some common procedures in SC include:

<u>Code</u>	<u>Procedure</u>	<u>Payment</u>
66983	Intracapsular Cataract extraction, insert lens	\$1,131.84
49505	Repair injured hernia (five years of age and older)	\$ 347.10
90050	Established patient, limited service	\$ 24.41
47600	Cholecystectomy	\$ 595.70
58150	Total hysterectomy	\$ 672.14

Contact Barbara Whittaker at the SCMA for additional information.

Increased Medicare Bonus Payment to Benefit all SC HMSAs

In January, 1990, Congress approved revisions in the Medicare bonus payment to centers/physicians serving designated health manpower shortage areas (HMSAs). These changes not only increase the amount of payment but also expand the number of areas to which this payment applies. The first change raises the bonus payment from five percent (which had been in effect since January 1, 1989) to 10 percent effective January 1, 1991. The second change expands the number of areas from only Priority 1 or 2 rural HMSAs to all HMSAs regardless of priority or rural-urban status. Therefore, effective January 1, 1991, all centers/physicians serving any South Carolina HMSA will be eligible for the 10 percent Medicare bonus payment.

To receive this Medicare bonus payment, the HMSA number (Y + HMSA code) must follow the CPT number (service code) on the HCFA 1500 form and must be indicated following every CPT number on every form submitted for reimbursement. The Medicare intermediary (Blue Cross and Blue Shield of SC) has stated that the HMSA number must be applied to ensure the receipt of the bonus

payment. Medicare staff will be scheduling information workshops this fall to educate staff at physicians' offices and community health centers in HMSA areas on the correct procedures for completing the HCFA 1500 form so that problems will be minimized when the new Medicare reimbursement changes take effect.

No incentives will be calculated on claims that are submitted without HMSA information.

For further information and assistance, please contact Richard Demarest at the State Health and Human Services Finance Commission (253-6177 in Columbia) or Provider Services at the Medicare office (754-1968 in Columbia).

SC WORKERS' COMPENSATION FEE SCHEDULE

The new Schedule of Fees for Physicians and Surgeons should have been mailed to you by October 1, 1990. If you have not received your copy, please contact Mr. Bill Rodgers, Director, Medical Services, SC Workers' Compensation Commission in Columbia at 737-5741.

FROM THE SCMA OFFICE OF LEGAL AFFAIRS

Questions about the National Practitioner Data Bank?

The SCMA's Director of Legal Affairs is available to speak to local medical societies or hospital medical staffs about the reporting requirements of the new data bank and about the substantial rights afforded physicians under the Health Care Quality Improvement Act of 1986. Interested physicians should contact Steve Williams at the SCMA.

Dealing with Lawyers

The SC Bar Association's Committee on Lawyer-Physician Relations is committed to improving the relationship between the two professions. Guidelines for interaction were established and approved by the governing bodies of both the SCMA and the SC Bar in 1985, yet few attorneys or physicians are aware of the guidelines. The committee is also soliciting information from the medical community about specific problems encountered between physicians and attorneys and ideas about how these problems can be resolved. If you would like to receive a copy of the guidelines, or have ideas about how to improve relations between the professions or appropriate seminar topics, please contact the Office of Legal Affairs.

SCMA YOUNG PHYSICIANS SECTION

Drs. Stephen Hulecki and Gerald Harmon represented the SCMA/YPS at the AMA Young Physicians Section meeting in June, 1990. If you are interested in receiving a copy of the Action and Position Statements of the AMA/YPS or Dr. Hulecki or Harmon's report on

this meeting, please contact Julia Brennan at the SCMA.

SCMA MEMBERS' INSURANCE TRUST

Are you aware that the SCMA has a health insurance plan available to all SCMA members and their office staff?

The Members' Insurance Trust is a self-insured program, administered by the association. All claims are paid directly from the SCMA office. The plan is provided as a service to SCMA members and is not for profit. An added benefit to our insurance program is that all insured members (dependents excluded) are automatically covered by a \$10,000 life insurance benefit.

If you would like additional information, please call Geri Galloway, Linda Nelson or Cindy Osborn at the SCMA office: 798-6207 in Columbia, or toll free 1-800-327-1021.

UPCOMING MEETINGS/CONFERENCES

Prenatal Substance History-Taking

The SCMA is co-sponsoring a seminar for physicians who provide prenatal care on effective history-taking skills to better elicit information regarding your patients' use of alcohol, cocaine or other harmful substances. It will be held on November 8, 1990 at 10:00 a.m. and again at 2:00 p.m. at the Peoples Auditorium, DHEC, 2600 Bull Street in Columbia.

The keynote speaker will be Gaye Chisum of the National Association for Perinatal Addiction Research and Education.

For additional information or to register, call Barbara Whittaker at SCMA Headquarters, or Julia Smith, Division of Maternal Health, DHEC, in Columbia at 737-4000.

AMA Hospital Medical Staff Section Meeting

The AMA Hospital Medical Staff Section Sixteenth Assembly Meeting will be held November 29 - December 3, 1990 at The Peabody Orlando Hotel, Orlando, Florida. The SCMA HMSS encourages each hospital to send a representative.

In addition to the regular meeting, the AMA is initiating a hospital medical staff leadership program on Thursday, November 29. The eight-hour program will focus on individual leadership skills needed by formal or informal medical staff leaders in today's health care environment.

For additional information or registration material, please call the AMA-HMSS at 1-312-464-4761.

Gearing up for Retirement

The North Carolina Medical Society, in cooperation with the AMA,

will be conducting a one-day workshop on November 11, 1990 at the Pinehurst Hotel in Pinehurst, NC. The workshop is aimed at those planning to retire within one to 10 years, physicians considering leaving practice for a second career or physicians' spouses. Call 1-800-722-1350 for details.

PUBLICATIONS AVAILABLE

The following new HIV-AIDS materials are now available from DHEC by writing to the Educational Resource Center, 2600 Bull Street, Columbia 29201: The Facts about Aids and HIV for Teens (200 copies per request; 300 copies per county health department) and Pregnancy and AIDS (500 copies per request; 1000 copies per county health department). Please allow at least three weeks for delivery.

The 25th anniversary volume of Current Procedural Terminology-CPT 1991 will be available from the AMA in December of 1990. To order by telephone, call toll free 1-800-621-8355. The cost to AMA members is \$27.00, to non-members \$34.00. With your order, you will receive a free premiere issue of the new quarterly newsletter, CPT Assistant, designed to enhance your ability to use CPT.

CAPSULES

Congratulations to Tom Austin, MD, who has been appointed by Governor Campbell as Chairman of the State Council on Maternal, Infant and Child Health.

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Contributions welcomed.
798-6207, in Columbia
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Melanie Kohn, Editor
Joy Drennen, Assistant Editor

COMPLICATIONS OF AUGMENTATION MAMMAPLASTY AND THEIR TREATMENT*

RICHARD C. HAGERTY, M.D.**
WARREN L. GOULD, M.D.

Cronin and Gerow described the procedure known as augmentation mammoplasty in 1964.¹ Since that time, over one million women in the United States have undergone this procedure. Because of the high satisfaction rate, demand for the operation is increasing. The best candidates for breast augmentation are patients who have lost the fullness of their breasts after childbearing. Their female body image, of which the breasts are of critical importance, can be drastically improved. Their clothes fit better and they are more confident in their appearance. However, most women with small breasts are candidates for the procedure, no matter what stage in life they are in. There are many techniques, as well as different types of implants available, all of which have advantages and disadvantages.²⁻⁴ Complications such as bleeding, infection and scarring around the implant may occur. The role of breast implants as it relates to breast cancer surveillance remains to be defined.⁵⁻¹¹ The purpose of this paper is to address the most important issues which confront us in breast augmentation.

THE PROCEDURE

There are essentially three different planes where the implant may be placed. These are the submammary position, the subpectoral position, and the total submuscular position (Illustrations 1 and 2).^{4, 12} The incision for insertion of the implant can be concealed in the axilla, or around the nipple areola complex. An incision below the breast in the inframammary crease allows the best visualization of the submuscular pockets, and usually heals well. The procedure requires about two hours

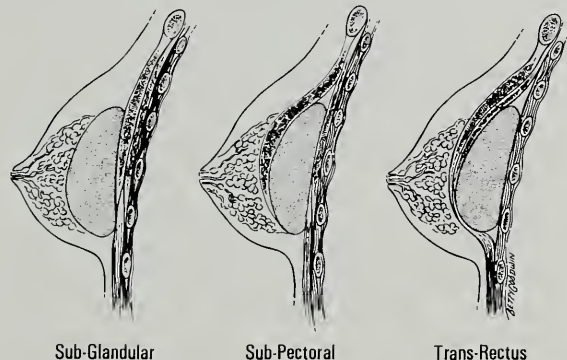


ILLUSTRATION 1: Line drawing showing the position of the implant in relation to muscle. In the submammary position, the implant is covered by breast tissue. In the subpectoral, the implant is partially covered by Pectoralis Muscle. In the transrectus position, the implant is about totally covered with muscle.

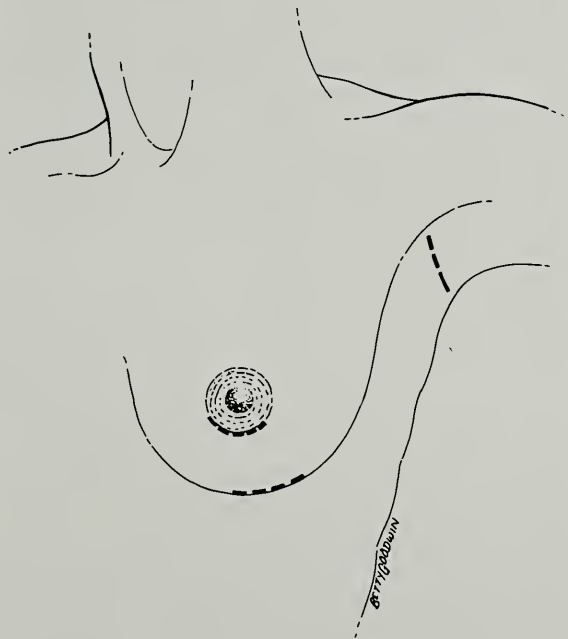


ILLUSTRATION 2: Incisions for augmentation mammoplasty can be made through the axilla, the areola complex or the inframammary crease.

*From the Division of Plastic Surgery, Medical University of South Carolina; Roper Hospital; St. Francis Hospital; and East Cooper Hospital, Charleston, S. C.

** Address correspondence to Dr. Hagerty at 159 Rutledge Avenue, Charleston, S. C. 29403.

to perform and can be done under either general anesthesia or intravenous sedation. Normally, this is done as an outpatient procedure, and only under unusual circumstances would the patient require hospitalization.

IMPLANTS

There are many implants now available. The original silicone implant is still the most commonly used. This consists of an outer layer, or shell, of silicone containing liquid silicone within. A second, outer envelope, may be added creating a Double Lumen implant.¹³ Saline can be added to this outer lumen to adjust for size discrepancies between the breasts. The second lumen may also reduce silicone (bleed) which is a leakage of microscopic amounts of silicone through the shell of the implant. Low bleed implants may have less capsular contracture. However, there are no data to suggest that any ill effects result from these microscopic amounts of silicone. (This is in sharp contrast to actual injection of liquid silicone into the breasts, which was performed by some practitioners many years ago and was abandoned due to a virtually universal incidence of complications.)

Silicone has been shown in numerous scientific studies to be nonreactive and to have no carcinogenic potential.¹⁴ The question has been raised as to whether the present small amounts of silicone could trigger an auto-immune reaction, resulting in disease such as scleroderma. This continues to be an object of investigation; however, several large focused reviews have failed to demonstrate any connection whatsoever between breast implants and auto-immune disease.¹⁵

Saline implants utilize a silicone shell filled with saline.¹⁶ It was thought that the saline implants might have a lower incidence of scarring around the implant, resulting in a more natural (feel) of the breast. Double blind studies to look at this question have shown no difference whatsoever, either in texture or incidence of capsular formation between saline implants and standard silicone implants. A small percentage of saline implants will also spontaneously deflate, requiring surgical replacement of a new implant. Mammography is moderately more accurate in patients with

saline implants because of the density problem of water vs. silicone, and smaller cancers possibly could be seen earlier in patients who have had saline implants placed in the sub-muscular position vs. some other implant.

Interest in polyurethane implants has recently rekindled.¹⁷ Polyurethane implants have been around for over 20 years but have recently enjoyed a renewed popularity because of the possibility that they may reduce the rate of capsular contracture, (i.e., scarring around the implant leading to a firm and unnatural feeling breast). Essentially, a polyurethane implant is a silicone implant coated with a textured surface of polyurethane which acts to disrupt the organized deposition of collagen, preventing a firm and organized scar around the implant. In the short term, the capsular rate with these implants is much lower, but the long term benefits remain to be seen. Initially, these implants were reserved for breast reconstruction following mastectomy. However, they are becoming increasingly used in primary breast augmentation. Concerns have been raised over the fate of the small polyurethane particles that separate from the silicone shell, but again, no untoward side effects have been ascribed to these.

COMPLICATIONS OF BREAST AUGMENTATION

Complications associated with breast augmentation can include bleeding, infection, alteration in nipple sensation and capsular contracture.¹⁸ Post-operative bleeding occurs in only about one percent of breast augmentation patients. A small amount of bleeding around the implant can be expected; however, occasionally a significant hematoma will require a return to the operating room for control.

Infection also occurs with less than one percent frequency. Often infections can be controlled with antibiotics, although there does seem to be an increased incidence of late capsule formation. Occasionally an implant will have to be removed due to infection, but this is fortunately a rare occurrence. Alteration in nipple sensitivity results from blunt dissection of the pocket for the breast implant

around the fourth intercostal nerve which supplies sensation to the nipple. Transient changes in nipple sensation (either hypersensitivity or decreased sensitivity) may occur in up to 15 percent of patients. These are normally transient and can resolve within several months; however, the possibility of permanent alteration in sensation exists.

Late term development of scarring around the implant or capsular contracture seems to be a problem. This results from the natural reaction to the body to an implant. Collagen is deposited around the foreign body, resulting in a layer of scar formation. Normally the (wall) around the implant is thin and pliable; however, for unknown reasons in some patients the wall will become thicker and form a firm, spherical contracture around the breast. The etiology of capsular contracture remains a mystery. The hypertrophic hypothesis suggests that myofibroblasts in the capsule make the capsule firm. However, the highest number of fibroblasts are present in the early healing phase and their number then diminishes. Paradoxically, contracture usually occurs three to nine months after surgery, well past the initial healing phase.¹⁹⁻²¹ The infectious hypothesis suggests that a sub-clinical infection may result in capsular contracture. *Staphylococcus epidermidis* is the most common bacteria incriminated.²⁰ The use of systemic or local antibiotics has been shown to significantly decrease the contracture rate.²¹ When implants do become infected, submuscular implants fare much better than subglandular implants. This is most likely due to flaps containing muscle, which are significantly more resistant to infection than flaps that do not contain muscle.²² The incidence of capsular contracture is quoted in the literature ranging from five to 50 percent. Many different approaches have been attempted to reduce the incidence of capsular contracture. The use of intraluminal steroids and antibiotic irritation have shown some benefit. In the short term, polyurethane implants have proven to be beneficial, but long-term follow-up is lacking. The placement of implants does seem to be of great importance. The greater the muscle coverage of the implant, the lower the incidence of capsular contracture. Placing

the implants in the subpectoral rather than the submammary plane seems to lower the incidence of capsular contracture from about 25 to 10 percent. Insertion of the implants via the transrectus route result has yielded a seven percent contracture rate in follow-up ranging from two to five years in our series.

Normally, breast augmentation should not interfere with subsequent breastfeeding. There was concern that microscopic silicone particles could be passed in the ducts to the newborn by breastfeeding. This has never been documented. Where the implant is placed in the subpectoral position, the implant does not come in contact with any of the breast tissue which would make this an even less likely occurrence. In any case, silicone is still an inert substance. We normally advise our patients to proceed with breastfeeding for at least three months, and then stop after that time to prevent the longterm effects of breastfeeding on the breasts, which include stretching of the skin.

Women with sagging breasts (ptosis) where the nipple areola complex lies below the inframammary crease can also be helped, especially with the transrectus augmentation technique. However, with severe ptosis, when most of the breast tissue lies below the inframammary crease, a breast lift procedure (mastopexy) is indicated. External scars underneath the breast are a drawback.

Treatment for capsular contracture depends on the degree of contracture and what technique was used originally for the augmentation. Closed capsulotomy, where the capsule is physically compressed about the implant, results in a rupturing of the capsule. The recurrence rate of this, however, is high, and there is always the risk of rupturing the prosthesis itself. Open capsulotomy, where the capsule is surgically removed, and the same prosthesis is replaced into the same pocket, has a much higher degree of success rate.^{22, 24-25} When a capsular contracture results around a submammary implant, the best solution is to do a subpectoral conversion where the implant is removed and repositioned into the submuscular pocket. For many capsular problems we also use the polyurethane implant, which has been shown to reduce the in-

cidence of recurrent capsular formation to less than five percent. Care is taken to completely remove the entire capsule before the polyurethane implant is placed in the previous scarred area.

BREAST CANCER IN AUGMENTATION MAMMAPLASTY

Several large studies have failed to show any correlation between the presence of breast implants and any increase in incidence of breast cancer. However, questions remain as to whether the implants may interfere with the early diagnosis of breast cancer.^{26, 27} Breast self exam is not affected by the placement of a breast implant, particularly when the implant is placed in the submuscular plane. Mammography is definitely affected by the presence of a breast prosthesis, as the prosthesis may shadow an area of breast tissue behind the implant.^{28, 29} Placement of the implant under the muscle reduces this problem but does not totally eliminate it. Also, modern mammography employs compression techniques which minimize the amount of breast tissue shadowed by the implant (Illustration 3). Nevertheless, there is still a degree of shadowing and for this reason we recommend that following breast augmentation, mammography be performed in three views rather than the standard two view mammogram.⁵

The individual risk of developing breast cancer depends primarily on the patient's family history of breast disease (for example, prior breast biopsy suggesting atypical hyperplasia). These concerns should be considered

carefully. Careful counseling on these issues is imperative before undertaking augmentation mammoplasty in any woman with a strong history of breast cancer. Submuscular placement of the implant in addition to improving mammographic diagnosis may also be of benefit in the unfortunate event that the patient does develop a breast cancer later on. Often at the time of mastectomy, the previously placed breast implant can be removed and replaced with a tissue expander or larger implant in order to complete immediate breast reconstruction at the time of mastectomy.

CONCLUSION

In conclusion, augmentation mammoplasty continues to be a highly successful procedure with a very high satisfaction rate among patients. However, with any surgical procedure there are associated risks. The aim of this paper is to address these risks in a realistic fashion so that patients and physicians can be aware in order to make informed decisions. □

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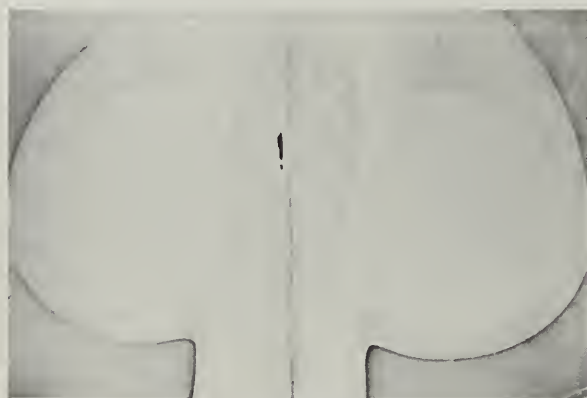


ILLUSTRATION 3: Mammogram patient has had augmentation mammoplasty with the prosthesis in the subglandular position. The second picture is of the same patient after she has undergone subpectoral conversion having the implant moved from the subglandular to the subpectoral position through the transrectus route. Please note the increased amount of breast tissue that now can be seen.

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TURN PAGE TO LEARN HOW

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The SCMA's Physicians' Advocacy and Assistance Committee can and wants to be the troubled doctor's advocate. The committee views abuse and addiction to alcohol and other drugs as an illness and deals with it non-judgmentally, non-punitively and therapeutically.

The program functions as a peer to peer activity, whereby an impaired physician will undergo evaluation and receive a treatment program tailored to his or her specific needs in work, family, finances and community. Voluntary participation results in committee advocacy and a protective role with the local hospital, medical society, State Board of Medical Examiners and Drug Enforcement Agency. Voluntary participants following through with treatment and aftercare are not reported to either the State Board or any other group or agency.

WHAT IS AN IMPAIRMENT?

The impaired physician has been defined as one who for any reason is unable to perform professionally at an optimal capacity. That is to say any disability (impairment) that causes a physician to be unable to do anything other than his very best. It is felt by this committee that this definition covers everything from Alzheimer's disease to Alcoholism. This committee has been asked by the State Medical Association to address all forms of impairment or disability in regards to the physicians in the state.

WHAT CAN YOU DO?

The committee would welcome the opportunity to meet with your concerned groups regarding questions about its activities.

Troubled doctors are usually unable to ask for aid themselves. You can help them by:

WRITING: Hugh V. Coleman, M.D., Chairman
Physicians' Advocacy and Assistance Committee
South Carolina Medical Association
P. O. Box 11188
Columbia, SC 29211
(803) 423-3342

CALLING: SCMA Headquarters (803) 798-6207 or after hours leave your message at (803) 798-6979

WHAT THE COMMITTEE WILL DO?

Your report will be investigated by a committee member and if verified, a pair of committee members will contact the impaired physician and suggest a plan of recovery. Should they fail to recruit the physician, a second and third team will follow. The physician signs a contract with SCMA limiting, as mutually agreeable, his or her practice and enters treatment. A second contract is executed following treatment for follow-up and assistance in maintaining recovery. At this time a colleague is also appointed to work with the troubled physician for a period of up to five years.

CARING AND ANONYMITY ARE KEYS TO THE SUCCESS OF THIS PROGRAM

Editorials

Back-to-back articles on cocaine use in pregnancy in this issue emphasize the magnitude of this growing problem. Dr. Elizabeth Baxley, who serves on the SCMA's Maternal, Infant, and Child Health Committee, was asked to prepare the following guest editorial. Guest editorials reflect the opinion of the author and do not necessarily reflect the opinion of the Editorial Board or the leadership of the South Carolina Medical Association.

—CSB

COCAINE ABUSE IN PREGNANCY—A MYRIAD OF UNANSWERED QUESTIONS

In this issue of *The Journal of the South Carolina Medical Association*, two articles are presented dealing with substance abusing pregnant women. As pointed out by both authors, the prevalence rate of this problem in our state is not known, but if it approaches the national rate of 10-11%, it would mean that over 5,000 South Carolina women in 1989 transmitted illegal drugs to their fetuses. At the provider level there has been a significant increase in the amount of dialogue concerning "cocaine babies," and the development of screening protocols and treatment programs for these patients.

The Governor's Council on Maternal, Infant and Child Health has commissioned a special task force to look at the problem in our state. The SCMA Maternal, Infant, and Child Health Committee has discussed this problem at each of its meetings. Local medical societies and hospital departments of obstetrics, pediatrics, and family medicine have found the subject creeping into their minutes. Clearly, this is not just a problem of the inner-city anymore. With the advent of crack cocaine, use of this drug now crosses cultural and socioeconomic boundaries. Although not as readily recognized as a problem that affects private pay and insured patients, studies have shown that they have an equal prevalence rate of cocaine use during pregnancy to those of indigent or Medicaid-supported patients.

We quickly are realizing the societal implications of caring for the medical complications of drug abuse which were pointed out by Dr. Elhassani. In addition to taxpayer dollars

which are necessary to support many of these mothers and children, there is a further loss of present and future productivity related to drug abuse. It's everybody's problem.

In preparing to deal with this new problem, much emphasis has been placed on the development of screening protocols to accurately identify women who are using cocaine. Horger, et al in Charleston County have developed what appear to be reasonable guidelines for their obstetrical screening program, but there is no consensus at a national level as to whom should be screened for illicit drug use. In the health care arena, previous attempts to identify persons with substance abuse of any kind have generally been difficult and often unsuccessful. Several questions arise in caring for pregnant women: "Who should be screened for drug use during pregnancy?" and "When during pregnancy should screening be done?" While the MUSC guidelines seemed to be effective in picking out women who were cocaine users, many of their criteria would only identify a problem at the time of delivery or after a complication has occurred. Albeit difficult to do, the ideal time to identify a problem would be at the first prenatal visit.

When we do determine that screening is appropriate in a clinical encounter, what are our ethical and legal responsibilities with regard to informed consent for testing for drug usage? How do we balance the sanctity of doctor/patient confidentiality with the moral obligation we have to the fetus and the good of the community? Caring for these women puts us dealing with an area of the law which is pres-

ently in a state of flux, including child protection law, civil commitments regarding mandatory treatment, and criminal prosecution.

Before jumping feet first into the process of identifying drug abusing pregnant women, should we not first insure that appropriate treatment options are available to them? Due to the powerful nature of crack and cocaine, and the control it seems to exert on its users, outpatient counseling is not likely to be effective in offering long term rehabilitation. The initial experience in the Charleston study supports this notion, with no patient keeping an appointment with the Substance Abuse Clinic prior to the threat of legal involvement. However, obstetrical patients have frequently been turned away from inpatient drug treatment facilities because of the pregnancy. This is due to lack of insurance coverage for this type of treatment, and an apparent inability to coordinate medical/prenatal care services for them. This places the patient and her provider in a "Catch 22" situation.

Another question posed by these studies is "What is the role of law enforcement in dealing with illicit drug use during pregnancy?" Horger, et al involved the Solicitor of the Ninth Judicial Circuit and the City of Charleston Police Department in their attempt to reduce the number of positive urine drug screens for cocaine. On the surface this seems to have been successful. Although in their brief experience this did not seem to drive women underground, how can we be sure that in other areas of the state, or in the future in Charleston County, that we are not only going to continue to have women abusing cocaine during pregnancy, but that these same women will fail to receive prenatal care, thereby compounding the complications seen with drug use? Would incarceration of patients only serve to post-

pone attempts to treat and rehabilitate?

Heretofore, providers of prenatal care have relied upon the Department of Social Services for help in dealing with a positive cocaine screen. DSS is in the process of working on a policy that would provide uniformity in all counties in the state with regard to procedure for evaluation of these patients. The proposal does not allow DSS to accept referral prior to delivery (unless there are other children in the household), and evaluation is done after delivery only if certain criteria are met. It also mandates referral of all cases to the local county solicitor's office. While this may prove to be more effective than our present "do nothing" policy, it still leads us back to the unanswered questions about involvement of law enforcement.

Dr. Elhassani's review of the pathophysiology of cocaine use is thorough and informative for practitioners in South Carolina. Dr. Horger, et al should be commended for making early attempts to deal with the problem we now recognize as being present in all areas of our state. Once their "get tough policy" was adapted to allow for treatment in lieu of arrest, the early outcomes appear more favorable. Nonetheless, there is a great deal of work to be done before the questions I have raised will be sufficiently answered. Completion of the prevalence study for South Carolina is a necessary first step. The time to deal with this is now. Despite our distaste of the subject, it will continue to be with us in caring for women and children in South Carolina

ELIZABETH G. BAXLEY, M.D.
Anderson Family Practice Center
Fant Street at Calhoun Street
Anderson, S. C. 29621

BREAST AUGMENTATION—IS THERE A RISK?

It is estimated that by the year 2000 one in every 33 women between the ages of 20 and 60 will have undergone augmentation mammoplasty (breast implants). The predicted frequency of this elective procedure (approximately two million women) makes it worthwhile to assess its potential risks. Drs. Hagerly and Gould, in this issue of *The Journal*,

have provided us with a thorough and lucid review of the implant, the procedure, its indications, and the perioperative complications of bleeding, infection, and capsular contraction.¹ The procedure involves general anesthesia, skin incisions and tissue dissection, and the "permanent" implantation of a silicone-containing, elastomer-capsuled prosthesis.

sis. This editorial will explore the potential long-term systemic risks with emphasis on immune responses and autoimmune disease. It should be emphasized that the individual benefits of breast implants to the self-image of the woman electing to receive them are substantial and contribute significantly to her psychological well-being and quality of life.

Infection and hemorrhage occur in about one percent of implants and may contribute to, but, due to their low incidence, do not adequately explain the occurrence of capsular contracture, a dense collagenous scar which can encase the implant in up to 50 percent of procedures and cause local pain and disfiguring retraction; scar, once formed (burn, keloid, cirrhosis, scleroderma), is notoriously difficult to remove. Can this example of local fibrosis be predicted and/or prevented?

Earlier attempts to inject paraffin or liquid silicone proved to be dangerous, even lethal, and have been prohibited. Presently soft silicone implants are coated with a hydrophobic (water repelling) surface. Silicone is a cationic (positively charged) element which can be combined with various anions, usually oxygen. Polymers of dimethyl siloxane make up silicone gels. Silicones are also present in hairspray, anti-foaming "gas" pills, and the coating on hypodermic needles, all considered to be harmless uses. The polymer chain length and the amorphous/crystalline state of the product can influence biological reactivity.^{2,3}

The host reaction following silicone breast implants can vary considerably. Capsules of fibrosis usually form; in situations where inflammation, both locally and systemically, is minimal, fatty tissue replacement ensues, reproducing the composition and consistency of normal breast tissue. If an inflammatory reaction occurs, particularly in the presence of low-grade infection or the retention of poorly degradable bacterial cell walls (peptidoglycans), silicone particles can be separated from the implant and taken up by macrophages, leading to an intense local as well as regional inflammatory reaction with fatty necrosis. In such settings, particulate implant material has been identified in regional lymph nodes (as it has in the case of silicone joint implants), with lymphadenopathy, gran-

uloma formation, and infiltrates of eosinophils and multinucleated giant cells. This reaction, leading to the formation of exuberant connective tissue in the form of granulomata and fibrosis, is unfortunately relatively common and can be symptomatically managed by antibiotic therapy. When the local reaction is intense, immune reactivity to silicone can be demonstrated with both hypersensitivity and autoimmune types of assay.

Fortunately, such local and regional inflammatory reactions become systemic only very rarely.⁴ Systemic reactions usually do not occur until 10-20 years after implant placement (estimated mean latency = 14 years). Full-blown autoimmune or connective tissue diseases have been associated with implants with an incidence of less than one per thousand after prolonged delay. Scleroderma is the syndrome most reported, but systemic lupus erythematosus and rheumatoid arthritis have also been noted.⁵⁻⁷ Removal of the implant does not consistently alter the course of the connective tissue disorder.

There are more questions than answers regarding these rare associations. Is the association real? Is the reactive recipient predisposed to react either by a general autoimmune predisposition or silicone-specific immunogenetic susceptibility, such as in the association of HLA-B27 with ankylosing spondylitis, for example. Can the predisposed host be identified pre-implant? These questions require formal prospective study for full answers. Experimental studies could hold great promise for improving the understanding not only of the local/systemic interactions in these patients but also of autoimmune connective tissue disease in general.

Recommendations, without a firm database, represent largely personal opinions. For now, all injections should be avoided, scrupulous technical care should be emphasized to minimize infection; in the future, identification of the potential connective tissue disease-prone implant candidate for implant can be undertaken by history, physical examination and perhaps even laboratory evaluation. The personal benefits of breast implants are the individual decision of each woman: the profession's responsibility is clearly "primum non nocere" (first do no harm) by reducing the risk to its absolute minimum.

Candidates for breast implants who have first degree relatives with rheumatoid arthritis, systemic lupus erythematosus, scleroderma or dermatomyositis/polymyositis could be at increased risks of a local/systemic connective tissue reaction. A personal history of unusual susceptibility to infection or the presence of autoimmune serological phenomena (antinuclear antibodies) could relate to a future implant reaction. In the future, perhaps a specific and sensitive HLA assay for the immunogenetic propensity to autoimmunity can be developed and applied to those who are candidates for augmentation mammoplasty. At our present level of understanding, these possibilities are largely hypothesis which can be tested experimentally to reduce further the potential risk of augmentation mammoplasty.

E. CARWILE LEROY, M.D.
Department of Medicine, Division of
Rheumatology and Immunology
Medical University of South Carolina
171 Ashley Avenue
Charleston, SC 29425-2229

Letter to the Editor

LIVING WILLS AND THE IDENTIFICATION BRACELET

To the Editor:

As you are aware, the living will has gained much publicity over the last few weeks as a result of the Cruzan Case and the recent Supreme Court ruling concerning their legality. Unfortunate as it is, so many patients are unable to impart this information to an emergency room or other attending physician during a medical crisis where emergency resuscitation, intubation et al is required. The use of an identification card in the person's wallet may be of little value in that situation.

As a solution, I read a recent letter in the *Medical Tribunal Journal* where Dr. Walter McLawhorn, Jr. suggests that patients with living wills identify themselves with an identification bracelet or necklace so stating their intentions not to be resuscitated, etc. This would help the treating physician should that patient ever develop a situation which re-

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quires acute intervention which was expressly prohibited in their living will.

As a busy practicing internist, I cannot recall everyone who has initiated living wills in our practice. I hope never to perform resuscitative measures on a patient that had asked me not to do so but, because of the lack of proper identification, those procedures might be performed. Then, you will have to explain to the patient and their family why you did something you were told not to do, and who knows where that would lead?

I feel that the idea of an identification bracelet or necklace for persons with living wills needs further dissemination.

TIMOTHY S. LEWELYN, M.D.
391 Serpentine Drive
Spartanburg, SC 29303

On the Cover:

SOUTH CAROLINA MEDICINE FIFTY YEARS AGO

Pictured on this month's cover is the graduating class of the school of medicine of the Medical College of the State of South Carolina in 1940. How many can you identify? Thirty-six men and four women graduated that year. Thirty-three were South Carolinians and most returned to South Carolina to practice with Sumter receiving the lion's share of at least four. Of the 40 graduates, 13 are presently living in South Carolina.

In 1940 the Medical College consisted of four buildings: the main building on Lucas Street, and three portions of the "Quadrangle": the Library-Pathology, the Physiology-Pharmacology, and the Outpatient-Laboratory. "Old Roper" was still used as the teaching hospital. Tuition was \$250 for South Carolinians and \$400 for non-residents. Robert Wilson was dean and there were three other officers of administration: a vice-dean, two registrars and two librarians.

At least three S. C. hospitals opened their doors that year: Coleman Hospital, Travelers Rest; Kelly Memorial, Kingstree; and John-

son Memorial, Hemingway. Two hospitals in S. C., Greenville General and Tri-County in Orangeburg, were among the 13 in the country to receive the loan of 2 grams of government-owned radium. This radium was to be used free of charge to the patient. The hospitals were selected on the basis of need for radium, competence of staff and adequacy of facilities.

A special meeting of physicians in the state was held to discuss the ramifications of the Selective Service Draft as the country geared up for defense. Governor Maybank cautioned that "The ranks of the medical profession will be . . . hit harder (by the draft) after this year, and there will be a greater scarcity of doctors for both military and civilian service." A prophecy that was, unfortunately, to prove true.

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Auxiliary Page

SCMAA HEALTH PROJECTS: 1990-91

The South Carolina Medical Association Auxiliary Health Committee is wholly committed to its ongoing goals and ideals. We shall continue to initiate and promote health care in our 28 organized counties by combining their efforts to promote health education and total well-being for all. We shall emphasize "Volunteerism," the value of service as our motivational philosophy. Volunteers are making a difference in the quality of life for all our citizens. We would hope that such efforts will serve to inform the public of the many hours of service rendered by physicians and their spouses, indeed, well reflect the positive role of the medical community.

With regard to the recent South Carolina Council on Alcohol and Drug Abuse Report, adolescents between the ages of 13-17 continue to choose alcohol as the number one drug for abuse, and cocaine as the number one drug for which they seek medical treatment. Therefore, we plan to initiate a health education project promoting parents' involvement in fighting substance abuse on their home ground. This is an intervention program whereby parents learn necessary "tools" to help their own children to make wise decisions.

In response to the goals of the Comprehensive Health Education Act, the AMA and SCMA Auxiliaries continue to work on the early childhood and adolescent health initiative to insure the healthy development of all. We shall promote the South Carolina Medical Association and the South Carolina Bar Association substance abuse program by encouraging county auxiliaries to work with medical societies and associations in coalition to bring this program into local schools. Examples of programs begun in response to the AMA initiatives are those which deal with sexuality and pregnancy victimization, psychological disorders, suicide, trauma and violence and HIV/AIDS education.

Along with the Health Education Van, we continue to endorse the Physicians' Family Support Committee; regional and fall board meeting (each meeting focuses on health related issues and also utilizes exhibitors from area health organizations such as the American Red Cross, the American Cancer Society, the Council on Drug and Alcohol Abuse, etc., who are eager to share educational materials, ideas and resources); annual school nurses' workshops (in conjunction with the South Carolina Department of Education and the South Carolina Department of Health and Environmental Control); and numerous other community projects.

To coincide with national "Talk About Prescriptions" month in October, we plan to promote a pilot program to encourage older citizens and their primary physicians to review their medication. In this way, we would hope to achieve our goal of improving physician/patient understanding and communication.

We look forward to working with each auxilian, physician and individual to promote the many issues of health care. We welcome your help and appreciate your support in all areas to assure our state of a successful and productive year.

MRS. WILLIAM A. DUNOVANT (JOANNE)
SCMAA Health Project Chairman

Classifieds

SOUTH CAROLINA—SENIOR MEDICAL DIRECTOR: Physician to provide clinical services as an independent contractor at four low-volume Emergency Departments in South Carolina low country with hourly clinical fees, flexible scheduling and professional liability insurance procured on your behalf. May also serve as Senior Medical Director for administrative stipend and benefits. *For further information, call (800) 476-3132 or send your CV to Steve Koronic, Coastal Emergency Services of Columbia, Inc., 2828 Croasdaile Drive, Dept. SO, Durham, NC 27705.*

COLUMBIA—TEACHING PSYCHIATRIST POSITION AVAILABLE: The William S. Hall Psychiatric Institute has an opening available on the Adult Inpatient Psychiatry Service for a psychiatrist with interest and aptitude in teaching, supervision, and administration. Research interests strongly encouraged but not mandatory. The successful candidate would be expected to function as the ward attending and team leader on a 24-bed acute to intermediate stay unit. They would have the responsibility of supervising two general psychiatry residents and two medical students in their day-to-day care of patients, chair the unit treatment team and manage the milieu. 37.5 hour work week. Separately compensated, at-home, night call to back up the in-house residents. Competitive salary depending on qualifications. In addition, a liberal private practice plan allows substantial supplementation of income. Applicants must be able to qualify for an academic appointment with the University of South Carolina School of Medicine. The South Carolina Department of Mental Health is an equal opportunity employer. If you're interested in doing some hands-on teaching without unnecessary ancillary pressures, contact: *Louis N. Gruber, M.D., Chief, Adult Inpatient Psychiatry Services, William S. Hall Psychiatric Institute, Columbia, SC 29202; (803) 734-7044.*

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WANTED: Board certified family physician to direct an innovative, multidisciplinary primary care education center. This center will serve as a model for the provision of primary health services in a rural area. Responsibilities to include: teaching health profession students and primary care residents; providing/supervising patient care services. Faculty appointment to one or more family medicine residency programs in South Carolina. Support available for research and professional development. Competitive salary and benefits. *Send resume to Dr. David Garr, Department of Family Medicine, MUSC, 171 Ashley Avenue, Charleston, SC 29425.*

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OUTCOME OF ACUTE SUBDURAL AND EPIDURAL HEMATOMAS IN A LEVEL I TRAUMA CENTER IN SOUTH CAROLINA*

N. SELBY RICHARDSON, III, M.D.
B. DANIEL PAYSINGER, M.D.**

INTRODUCTION

At least seven million head injuries occur annually in the United States, and, unfortunately, a large proportion have a poor outcome.¹ Epidural hematomas occur in approximately one percent of the patients with head trauma admitted to the hospital and acute subdural hematomas are about twice as frequent.²

Many clinical factors have been recognized as important to the outcome of patients sustaining head trauma.¹ This study reviews patients with acute subdural and epidural hematomas and evaluates their outcome based on the Glasgow Coma Scale and whether they were conscious or unconscious prior to surgical intervention.

CLINICAL MATERIAL AND METHODS

This is a retrospective clinical study in which data were reviewed and collected from the charts of patients admitted to Richland Me-

morial Hospital with acute subdural and epidural hematomas from 1986 to 1988. The discharge code for acute subdural and epidural hematomas was used to identify the charts and included patients with isolated lesions as well as those sustaining multiple trauma. The patients selected had their traumatic episode within 72 hours of admission to the emergency room.

Computer tomography of the head was used to define the type of lesion and the severity of the lesion was determined by the Glasgow Coma Scale (Table 1). This scale has become accepted as the measure by which to categorize head injury patients and has demonstrated good correlation with the outcome in the severely head injured population.^{3,4}

The Glasgow Outcome Scale was used to classify the outcome. Determination of the patients' outcome category was based on their condition at discharge from Richland Memorial Hospital or time of transfer to another facility. The Glasgow Outcome Scale consists of five categories: death, persistent vegetative state, severe disability, moderate disability and good recovery. In this study, the

*From the Departments of Emergency Medicine (Dr. Richardson) and Surgery (Dr. Paysinger), Richland Memorial Hospital, Columbia, S.C.

** Address correspondence to Dr. Paysinger at 3301 Medical Park Road, Suite 310, Columbia, S.C. 29203.

TABLE 1
GLASGOW COMA SCALE

Eye-Opening Response:	Spontaneous	4
	To Speech	3
	To Pain	2
	None	1
Verbal Response:	Oriented	5
	Confused Conversation	4
	Inappropriate Words	3
	Incomprehensible Sounds	2
	None	1
Best Motor Response:	Obeys	6
	Localizes	5
	Withdraws	4
	Abnormal Flexion	3
	Extensor Response	2
	No Movement	1

death category included all patients who died after being admitted with acute subdural or epidural hematomas and no distinction was made between patients who died as a result of the hematomas or secondary systemic complications. In the persistent vegetative state category, there was absence of adaptation to the environment and of any speech with no evidence of mental function in a patient who was apparently awake at times with spontaneous eye opening. Severe disability implies that patients were dependent on the help of others for activities of daily living. Moderate disability included those patients independent as far as activities of daily living were concerned, such as feeding and dressing themselves, but were unable, because of their physical and mental disability, to return to their former occupational level. Good recovery indicates that the patients had been able to return to their former occupational level but not necessarily to their former occupation. Such patients may have had minor defects in neurological or mental function.^{1,5,6}

RESULTS

In this study, the mortality rate of all acute subdural hematomas treated with or without surgery was 44.7 percent (Table 2). Those patients with a Glasgow Coma Scale score of 3-5 had a mortality rate of 75 percent as compared to a mortality of 11.8 percent if the

TABLE 2
ACUTE SUBDURAL HEMATOMAS

GCS	No. of Cases	Outcome (%)				
		Death	Vegetative	Severe Disability	Moderate Disability	Good Recovery
3-5	20	75	5	5	10	5
6-8	8	50		25	25	
9-11	2					100
12-15	17	11.8	5.9	5.9		76.5
Total	47	44.7	4.3	8.5	8.5	34

Glasgow Coma Scale score was 12-15. Of the 47 patients that presented with acute subdural hematomas, 63.8 percent were operated on for evacuation. The overall mortality rate of those who underwent surgical intervention was 56.7 percent. Those patients with a Glasgow Coma Scale score of 3-5 who underwent operation had a 76.5 percent mortality compared to a 16.7 percent mortality in the 12-15 Glasgow Coma Scale score category. When the level of consciousness was considered, patients who were unconscious at the time of surgery had a mortality rate of 72.7 percent as opposed to 12.5 percent if the patient was still conscious at the time of surgery.

In this small study of 16 patients with epidural hematomas the mortality rate was 6.3 percent with a good recovery of 87.5 percent (Table 3). Those patients with a Glasgow Coma Scale score of 3-5 had a mortality rate of 33.3 percent and a good recovery of 33.3 percent while 100 percent good recovery was achieved in the 12-15 category. We found a

TABLE 3
EPIDURAL HEMATOMAS

GCS	No. of Cases	Outcome (%)				
		Death	Vegetative	Severe Disability	Moderate Disability	Good Recovery
3-5	3	33.3			33.3	33.3
6-8	1					100
9-11	1					100
12-15	11					100.3
Total	16	6.3			6.3	87.5

33.3 percent mortality rate in unconscious patients who underwent surgery and 100 percent good recovery in patients who had not lost consciousness prior to their surgical procedure. All of our patients who were followed without surgical intervention were in the 12-15 Glasgow Coma Scale score category and all had good recovery.

DISCUSSION

The data from this study were compared to and consistent with that of other series in the literature. Studies of acute subdural hematomas reveal a very high mortality rate ranging from 25 percent to over 90 percent. This high mortality rate relates to the major underlying diffuse brain injury that is associated with many of these injuries, which is then compounded by rapid brain compression as a result of the subdural hematoma.²

The mortality rate for acute subdural hematomas here at Richland Memorial Hospital was 44.7 percent with a 75 percent mortality in the 3-5 Glasgow Coma Scale category. A multicenter study by Gennarelli, et al, found acute subdural hematomas with a Glasgow Coma Scale score of 3-5 to uniformly be the worst problem with a 74 percent mortality.⁴ Bowers and Marshall's study of head injury outcome with a Glasgow Coma Scale score of 7 or less reported a mortality rate of 52 percent for acute subdural hematomas.⁷

The study by Gennarelli, et al, found acute subdural hematomas to cause the worst quality of survival with only 14 percent of patients having a good recovery or moderate disability (eight percent good recovery) in the 3-5 Glasgow Coma Scale category. This study also demonstrated a poor quality of survival for patients with a low Glasgow Coma Scale score with a 15 percent good recovery or moderate disability (five percent good recovery) in the 3-5 Glasgow Coma Scale category.

In this study we were surprised to find only 16 patients with epidural hematomas. The mortality rate for epidural hematomas here at Richland Memorial Hospital was 6.3

percent with a 33.3 percent mortality in the 3-5 Glasgow Coma Scale category and a good recovery of 33.3 percent in this category. In Gennarelli's multicenter study, patients with epidural hematomas in the 3-5 Glasgow Coma Scale category had a mortality rate of 36 percent with a 21 percent good recovery.⁴

Mortality in patients due to epidural hematomas is virtually restricted to those who undergo surgery while unconscious. Although zero mortality is common in noncomatose patients, as in this study, 25 percent to 71 percent of comatose patients undergoing surgery have a fatal outcome.⁸ In a study by Seelig, et al, 41 percent of the patients who deteriorated to coma before operation died.⁹ This study revealed a 33.3 percent mortality rate for unconscious patients who underwent operation as compared to 100 percent good recovery in conscious patients who had surgery.

CONCLUSION

The management of patients with severe head injury and the high mortality and morbidity associated with it continues to be a major challenge for neurosurgeons. Acute subdural and epidural hematomas are surgically important intracranial hemorrhagic complications of head trauma that have a significantly high mortality and poor prognosis. The Glasgow Coma Scale and whether the patients were conscious or unconscious prior to surgical intervention are important measures in the evaluation of these patients and in predicting their outcome. This study evaluated patients with acute subdural and epidural hematomas who were admitted to Richland Memorial Hospital and demonstrated that these measures do have a good correlation with the outcome in this type of patient. The data clearly illustrate the prognostic significance of the Glasgow Coma Scale score. The lower the Glasgow Coma Scale score, the worse the overall prognosis in these patients. Also, it is apparent that if the patient loses consciousness prior to surgical intervention, the mortality and morbidity is greatly increased. □

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Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of non-susceptible organisms.

- Positive direct Coombs' tests have been reported during treatment with cephalosporins.

- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.

- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions have been reported with the use of Ceclor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritis/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, serum-sickness-like reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials (with an incidence in children in clinical trials of 0.055%) to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization = two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.

- Stevens-Johnson syndrome, toxic epidermal necrolysis,

and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.

- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertension, dizziness, and somnolence have been reported.

- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

Abnormalities in laboratory results of uncertain etiology:

- Slight elevations in hepatic enzymes.

- Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.

- Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Ceclor and Coumadin concomitantly.

- Abnormal urinalysis; elevations in BUN or serum creatinine.

- Positive direct Coombs' test.

- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinistest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

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A MODIFIED CYSTOURETHROPEXY IN THE MANAGEMENT OF INCONTINENCE AND DYSPAREUNIA*

JACK M. GRAHAM, M.D.

H. ALBERT STRESING, M.D.

A modified cystourethropexy was performed on 60 patients with stress urinary incontinence. All patients were rendered continent by the procedure. Twenty-two of the 60 patients were also relieved of dyspareunia. The procedure used is a modification of the Marshall-Marchetti-Krantz (MMK)^{1, 2} cystourethropexy which consists of dissecting the peritoneum from the posterior aspect of the bladder and freeing the bladder from its lateral fascial attachments. This lateral and posterior dissection allowed for better anatomical correction of the cystocele and altered the angle of the trigone. During intercourse the penis is directed behind the trigone and not on it thus probably explaining the disappearance of the dyspareunia.

Indications for surgery are either stress urinary incontinence or an uncomfortable cystocele. Such a cystocele is defined as either protruding through the vaginal orifice or causing the patient to feel that she is "sitting on her bladder."

All patients had cystoscopic evaluation, determination of bladder capacity and excretory urography. Bladder capacity ranged from 350ml to 1050ml and presurgical residuals for 10ml to 200ml. Cystometric studies were done on patients with abnormal clinical findings. In those patients that had dyspareunia as a problem, pressure on the trigone with the finger duplicated the pain. In some patients a thinned out area of the bladder wall with minimal musculature present was found posteriorly. It is shaped much like a triangle with the base at the junction between the peritoneum and bladder and extending posteriorly to the interureteral ridge. Presurgical diagnosis was

generally not made. It is believed that this segment acted as a "pseudodiverticulum."

METHOD

Patients are surgically prepared for abdominal cystourethropexy. Serving as a guide for the placement of the periurethral sutures and for identification of the uppermost segment of the urinary bladder, a #20 foley catheter is inserted into the bladder via the urethra. The junction of the bladder and the peritoneum is located (Fig. 1A) and by sharp and blunt dissection, the peritoneum is reflected off the dome and posterior aspect of the bladder (Fig. 1B). Accidental entry into the bladder and/or the peritoneum may occur. One must exercise caution during this dissection or a portion of the muscle wall may be dissected free from the bladder. The bladder is now dissected free from its lateral attachments beginning with sharp dissection at the area of the dome of the bladder. By using a sponge stick the bladder is dissected free from its lateral fascial attachments to the pelvic wall (Fig. 1C, D). If the "pseudodiverticulum" (Fig. 2A) is present it is excised and the bladder is closed (Fig. 2C) with #0 chromic sutures placed about 1cm apart using full thickness bladder wall mucosal sparing sutures. #1 chromic sutures are now placed lateral to the urethra into the anterior vaginal wall and the pubic symphysis as described in the classic MMK cystourethropexy.

At the level of the origin of the rectus muscle a suture is passed down through the anterior rectus sheath and muscle into a portion of the lateral bladder wall and brought up on the same side through rectus muscle and fascia and tied. The other side is treated in the same manner. At the same level a #1 chromic suture is brought through the fascia, rectus muscle, anterior bladder wall and through rectus muscle and fascia on the opposite side

*From Spartanburg Urological Associates, P.A., 225 East Wood Street, Spartanburg, S.C. 29303 (address correspondence to Dr. Graham).

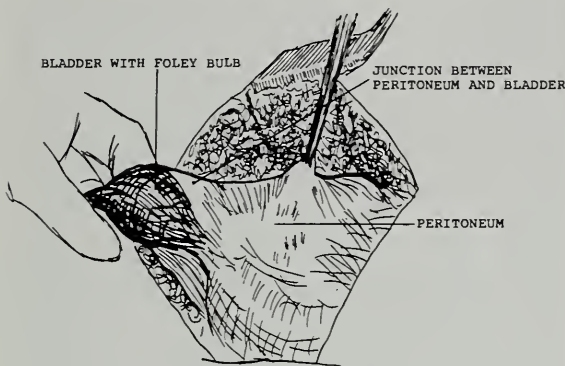


FIGURE 1A. The junction between bladder and peritoneum has been located using the foley bulb as a guide.

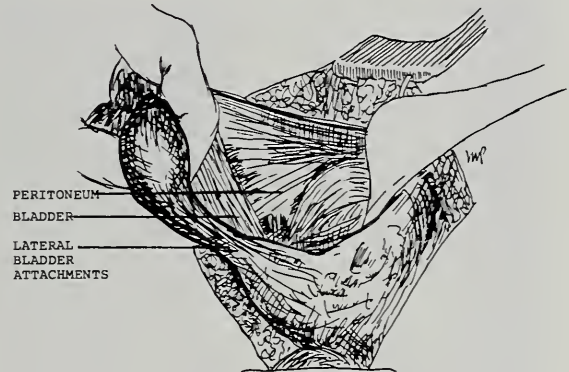


FIGURE 1B. The bladder has been dissected free posteriorly.

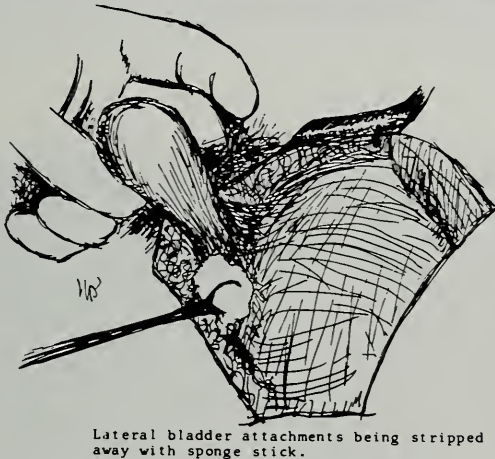


FIGURE 1C. Lateral bladder attachments being stripped away with sponge stick.

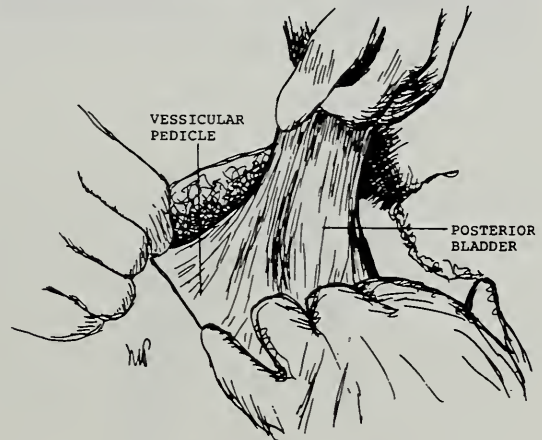


FIGURE 1D. Dissection is now complete.

and tied. Penrose drains are then placed through a stab wound on either side of the incision and the peritoneum is carefully closed if entered. The incision is profusely irrigated with normal saline. A suprapubic catheter is placed through a stab wound lateral to the incision and into the urinary bladder. The remainder of the cystourethropexy is accomplished using #1 chromic sutures through the fascia, muscle and anterior bladder wall and back up on the same side through the muscle and fascia and tying. Minimal tension is placed on these sutures. The bladder usually comes up to about half the length of the incision. Additional sutures of #1 chromic are used to close the remainder of the fascia/mus-

cle incision. A running suture of #1 PDS is then used to close the fascia. The subcutaneous tissues are approximated with #00 plain and the skin with staples. The Penrose drains are sutured to the skin edges and a dressing is applied.

Postoperative care is essentially the same as any standard cystourethropexy. Considerable drainage may occur but the drains can usually be removed on the second or third postoperative day. The suprapubic catheter remains for a total of 14 days then clamped and the patient is allowed to void. When the measured residual is less than 50ccs, the suprapubic catheter is removed. A Foley catheter is inserted into the bladder through

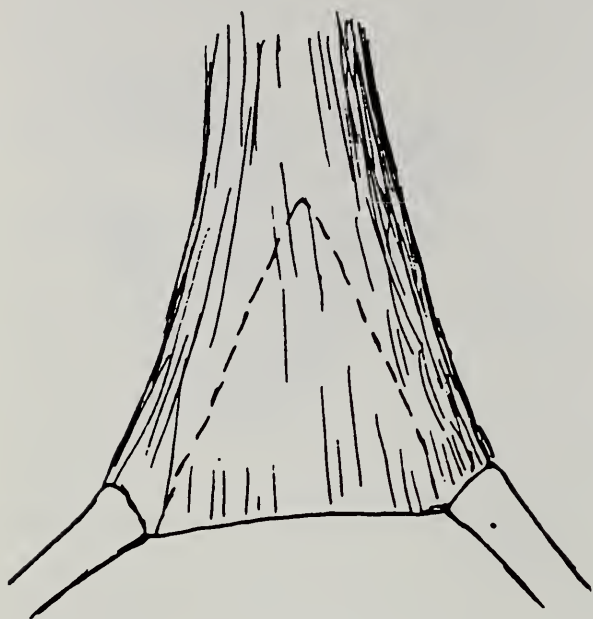


FIGURE 2A. Posterior bladder with thin area outlined.



FIGURE 2B. Posterior bladder with thin area excised.



FIGURE 2C. Bladder closed.

the urethra. The patient is instructed to remove the catheter 48 hours later in the early morning. If she is unable to void, catheter drainage is reinstituted and the process is repeated until adequate voiding resumes.

Immediately after removal of the catheter the patient may need to void every hour or so;

however, over the next two to three weeks the bladder distends to normal capacity. Bladder spasms may be quite severe and require treatment with both analgesics and antispasmodics, medications such as ProPantheline Bromide (ProBanthine) and a combination of Oxycodone and Acetaminophen (Tylox). In addition Chlordiazepoxide and Amitriptyline HCL (Limbitrol-DS) may be given in the early evening for smoother sleep and as a bladder spasmolytic. Residual urine should be checked as clinically indicated and Bethanechol may be necessary in some cases. Radiologic illustrations of the new position is depicted in Figures 3-A, B, & C.

RESULTS

We have performed this modification of MMK in 60 patients ranging in age from 26 to 83 years, with median age of 50. Following the procedure, no deaths or major complications were observed. Two patients had pelvic cellulitis after removal of the suprapubic catheter due to leakage of urine into the pelvic area. Pelvic cellulitis was manifest by a sore lower abdomen and pain in the coccygeal area and leg. These symptoms disappeared following administration of broad spectrum antibiotics and catheter drainage.



FIGURE 3A. Preoperative upright film.



FIGURE 3B. Upright film two weeks postoperatively.



FIGURE 3C. Upright film six weeks postoperatively.

Inserting a urethral catheter 48 hours following removal of the suprapubic catheter has obviated this problem. No patients have had stress urinary incontinence and only two patients have had to use self-catheterization. Twenty-two patients with dyspareunia were relieved of their symptoms following the

surgery. This represented all patients with such a complaint preoperatively. Residual urines diminished to less than 50ml unless the patient was either diabetic, debilitated or on psychotropic drugs. Seven of the patients weighed over 87Kg. The heaviest patient weighed 112Kg. Clinical improvement in the general bladder physiology was noted over a period of six months postoperatively; however, in six to ten weeks patients were almost normal.

No restrictions have been placed on activity after three months.

As in other organs of the body, the bladder undergoes histologic changes with aging. Thinning of the bladder posteriorly appears to occur in about 30% of women with stress incontinence and cystocele. While increasing the urethral length and angle, as is seen in the classic MMK, does help the continence mechanism, often it fails to improve voiding and may make voiding more difficult. By reflecting the peritoneum off the bladder and excising thinned out segments when present, we have been able to rid them of stress incontinence and enable the patient to void in a more normal fashion. In addition, any degree of cystocele can be corrected. Outcomes indicate that an acute urethrovesical angle or par-

tial obstruction of this area is not a prerequisite for normal continence.²

CONCLUSION

A computer search of the urological literature yielded only one reference to dyspareunia.³ In an editorial in the *British Journal of Medicine*,⁴ a good overview of the problem was presented. Trigonal dyspareunia was not mentioned. This subject is not in the index of *Campbell's Urology* fifth edition.

In our experience no patient who underwent the modification of the MMK procedure had either unstable bladder or ureteral injury. All of them were rendered continent. By using

this approach any large floppy cystocele can be repaired and offers the only option other than the usual anterior repair from below. It is our belief that this procedure is beneficial, practical and should be permanent. □

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NOVEMBER 1990

FINAL BUDGET RECONCILIATION BILL PASSED

Following are excerpts from an AMA preliminary report on the final FY 91 budget reconciliation package which was approved in late October.

Anti-Hassle Bill: Four of the five elements of the Rowland/Baucus anti-hassle bills (HR.4475 and S.2591) were adopted:

- cross-coverage billing (including coverage by in locum tenens service) will be permitted, with a 60-day maximum for Medicare; 14 continuous days for Medicaid (90 days for in locum tenens);
- a Practicing Physician Advisory Council to HCFA will be established;
- a demonstration study on release of payment screens in at least six carrier areas has been authorized; and
- the aggregation of claims denial appeals will be studied.

125% Balance Billing Limits: The bill moderates the premature balance billing limits for FY 91 by raising the floor on prevailing rates from 50 percent to 60 percent and increasing the limits on "evaluation and management" services to 140 percent.

Medicaid Expansion: The bill expands eligibility of low-income children and the "frail elderly" for Medicaid.

Physician Certification: The bill rejected efforts by Rep. Pete Stark to require periodic Medicare certification of physicians.

Triplicate Prescriptions: Also rejected was Pete Stark's proposal to mandate triplicate prescription programs in all 50 states.

Physician Self-Referral: The 1989 prohibition against self-referral to clinical labs was not expanded to include any other type of physician-owned facility.

MEI Update: The bill updates by two percent payments for "primary care" services; no 1991 update for other services.

EKGs: Separate payment for interpretation of EKGs will be prohibited.

New Overpriced Procedures: "Unsurveyed" procedures which are presumed to be overvalued will be reduced.

Beneficiary Increases: The bill increases the Medicare Part B premium from \$28.60 to \$46.10 by 1995. In addition, the beneficiary deductible will rise to \$100.00 in 1991.

Assistants at Surgery: Payments for assistants at surgery will have increased limitations.

Further information will be provided when received by the SCMA. Meantime, direct questions to Barbara Whittaker or Bill Mahon at SCMA headquarters.

MEDICARE UPDATE

Comparative Performance Report Program

Last month's newsletter explained that approximately one percent of physicians will receive a letter from the carrier which will include data indicating where the physician's practice varies significantly from his peers.

Although this letter will state these data are for information, the SCMA has learned from HCFA that carriers will be expected to audit physicians who have received a profile and who did not provide sufficient information regarding their practice to explain the statistical variance.

If you are one of the approximately one percent of physicians who receive a comparative report from the carrier, it is essential that you review this carefully and provide a written response to the carrier. Please call Barbara Whittaker at SCMA headquarters if you have any questions or if the SCMA can be of assistance to you in this matter.

Good News on CLIA-88 Regulations

Your hard work and pressure are paying off! Health and Human Services Secretary Louis W. Sullivan and HCFA Director Gail Wilensky are now indicating that major portions of the CLIA-88 regulations will have to be rewritten based on the more than 50,000 comments received during the 120-day extended comment period. More than 250 letters from members of Congress were included in the comment count.

One of the law's original sponsors, Senator Barbara A. Mikulski (D-MD), has cautioned HCFA to develop final regulations that are based on the best available scientific information and common sense to make them practical and effective without sacrificing access to needed care.

Even the Executive Office of the President, the Office of Management and Budget, has taken the unprecedented position of

formally commenting on the proposed regulations by saying that "it is not clear that the regulatory objectives (of CLIA-88) are chosen to maximize the net benefits to society." It stated that HCFA should finish a previously ignored requirement for completion of a regulatory impact analysis assessing the costs and benefits of the chosen approach for the rule before publishing a final rule.

Dr. Wilensky indicated the need to reassess the levels of testing, personnel standards, and ways to accommodate and encourage evolving technologies. Estimates are that the final rule will not be completed in eight to 12 months. The AMA will ask HCFA to publish any significant redraft of the regulations as a notice of proposed rule-making so that physicians and others can comment on the "new" approach.

Physicians' Submission of Medicare Claims

HCFA has provided new instructions to the carrier and the SCMA since the September newsletter when information was published regarding superbills.

Please note that the carrier will no longer process a claim which is submitted by a beneficiary prior to submission by the physician's office if the beneficiary's copy includes a notation by the physician's office that the claim will be submitted by Medicare. Then the information will be returned to the beneficiary with instructions to contact the physician as to the reason these charges have not been filed.

Please note that you must **CLEARLY** have it indicated on the patient's copy that your office will file the claim or Medicare will process the charges and a violation will be recorded.

Direct Medicare questions to Barbara Whittaker or Cindy Osborn at the SCMA.

MEDICAID UPDATE

Unlimited Office Visits for Children

Medicaid recipients under the age of 21 are not bound to the 18 ambulatory visit restriction which applies to older recipients. The estimated visits remaining column on their Medicaid cards will always reflect 18 visits and should be disregarded.

Third Party Liability

Beginning with claims processed on or after November 7, 1990, the State Health and Human Services Finance Commission will no longer cost avoid pregnancy-related and preventive pediatric claims for Medicaid recipients with private insurance coverage. Physicians who bill Medicaid for these services when other coverage is available will have their claims paid by Medicaid. A bulletin

providing more details will be mailed out soon. Questions should be addressed to your Medicaid representative in Columbia at 253-6134.

For all Medicaid claims other than pregnancy-related and preventive pediatrics, the physician's office must first bill the other insurance company (listed on the patient's Medicaid card.)

Retro Health Insurance Letters

No more retro health insurance letters will be sent out by HHSFC. Physicians will no longer be required to file claims with private insurance carriers after Medicaid has paid the claim. The responsibility of following up on alternative insurance coverages will fall to HHSFC staff. Existing retro health letters now in your office may either be acted upon or returned to your representative.

Diagnosis Codes for Radiology and Pathology Claims

All Medicaid radiology and pathology claims now require diagnosis codes. HHSFC will identify pregnancy-related claims by the diagnosis code on the claim. Because of this, radiologists and pathologists are now required to include a valid diagnosis on their claims. This is not perceived by HHSFC to be a major problem since most radiologists and pathologists are electronic billers with front-end edits requiring that they include diagnosis codes on their current claims.

Contact Barbara Whittaker at the SCMA or your Medicaid representative if you have questions.

PRO UPDATE

Use of Dummy Numbers

Apparently there is some confusion as to who is responsible for obtaining numbers when prior approval is mandated for surgery. If the physician is confronted with emergent or urgent surgery, the use of dummy numbers is proper. If the surgery is not urgent or emergent (is elective), the physician should obtain the prior approval number. If a physician forgets to get the prior approval, he or she should then coordinate with the hospital or ambulatory surgical center and have the facility send the complete records to Carolina Medical Review. CMR must review the complete medical record before they can issue a payment authorization number postprocedure. Once the review is completed, the facility will be provided an authorization number for the case. That same number is to be used by the physician when submitting the Medicare claim for payment. Claims previously rejected should not be submitted as appeals to Medicare without the PRO authorization number as Medicare cannot process the claim.

Nosocomial Infections

HCFA has initiated changes in the nosocomial infection quality screens. The new, more realistic screens will deal only with bacteremia and septicemia when supported by two blood cultures. This change should greatly reduce the number of quality screen failures being referred for physician consultant review and should eliminate letters unnecessarily questioning other nosocomial infections.

STATE LEGISLATIVE UPDATE

The 1991 Legislative Session is beginning to crank up. With this being an election year for the House of Representatives and with retirements and the Federal Sting, there will be a lot of new faces in the State House.

The medical committees in both the House and the Senate will have new chairmen. Rep. Donna Moss has resigned her House seat and Senator Peden McLeod has resigned to be the Code Commissioner in the Legislative Council.

The Senate began pre-filing on September 10, and the pre-filing deadline or closing date is December 10. The House can begin pre-filing only after the certification of the House members, which will take place some time after the November 6 election. The opening and closing dates will be determined by Speaker Bob Sheheen.

As of October 1, the Senate has pre-filed 225 bills. Some of the bills of particular interest to the SCMA are:

S. 30 (Senator Mike Rose): Mandatory suspension of professional licenses for a period of two years, to a person convicted of a drug or controlled substance offense.

S.49 (Senator Mike Rose): Triplicate prescription for controlled substances.

S. 69 (Senator Mike Rose): Compensation of any physician or other employee of a state medical school to be made public.

S.76 (Senator Mike Rose): Allows a state income tax credit for a licensed physician who provides professional services to an indigent patient in an amount equal to five percent of the amount that would be paid by the State Health Plan for the services provided.

As you can see, 1991 is going to be a busy year. We have already begun meeting with legislators, including Senator Mike Rose. We are sharing our position on legislation which will affect medicine.

Other issues we expect to arise this year are independent

practice for physical therapists, prescribing privileges for nurses and mandated insurance for chiropractors.

Call Jan McKellar at the SCMA for information on SC legislative issues.

UPCOMING CONFERENCES AND MEETINGS

The Tri-State Medical Managers Meeting is scheduled for December 3-5, 1990 at the Omni Hotel in Charleston, SC. Topics to be addressed include "Coping with Medicare" and "Your Role as a Manager." Contact Betty Hodge in Charleston at 792-4762 for further information.

PUBLICATIONS/VIDEOTAPES AVAILABLE

The SC Commission on Alcohol and Drug Abuse has established a Drug Information Access Line. If you have a pregnant patient you know cannot stop drinking, help is available. Credentialed addiction counselors in every SC county are trained to help women and their babies have as healthy lives as possible. You may advise your patient to call 1-800-942-DIAL. The commission also has fact sheets on Fetal Alcohol Syndrome and Cocaine Babies. Call the access line for copies to place in your waiting rooms.

The AMA toll free telephone number in the October newsletter for ordering copies of CPT-4 was listed incorrectly. The correct number is 1-800-621-8335.

The SCMA library has received from the AMA a copy of a videotape entitled "Science and Art in the Name of Healing," which was developed to interest high school and college students in medicine as a career. Brochures are also available which can be used in conjunction with the videotape. If you are asked to give a talk at your local school and wish to view a copy of this tape, along with the brochures, please call Kim Fox or Joy Drennen at the SCMA.

CAPSULES

Thomas C. Rowland, Jr., MD, OB/GYN from Columbia, was elected vice president of the Southern Medical Association during its 84th Annual Scientific Assembly in Nashville, TN in early October. Dr. Rowland is a past president of the SCMA.

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WILL A NEW STUDY OF HEALTH CARE COSTS MAKE A DIFFERENCE? AN ANALYSIS OF THE REPORT OF THE BLUE RIBBON TASK FORCE TO STUDY HEALTH CARE COSTS IN SOUTH CAROLINA*

GERARD C. JEBAILY, M.D., M.H.S.A.**
WALTER JONES, Ph.D.

On May 10, 1990, the South Carolina Joint Legislative Health Care Planning and Oversight Committee received the final report from the appointed Blue Ribbon Task Force to Study Health Care Costs. That such a group of prominent South Carolina citizens was even assembled gives testimony to the widespread serious concern over escalating health care costs. While no physicians were appointed, the analysis and 31 recommendations made by this task force should be understood by all South Carolina physicians in order to participate in any further debate. In this article, we will review the principal findings and critique the reasoning of the task force as it is described in their report. While we may take exception with some of their suggestions, we laud their generous gift of time and energy in service to their state and to this most pressing political agenda item. As Task Force Chairman Robert McCoy stated, "We cannot afford the best health care money can buy for every person in our country or in our state (and) . . . the refusal to face those very real limits distorts all our efforts to address the issues of health care costs, access and quality."¹

THE TASK FORCE REPORT

The Task Force was divided into Prevention/Health Education, Health Care Competition, Cost Containment and Health Care Regulation subcommittees and was served by a knowledgeable staff that had access to information from all sectors of the health care system in our state. Among the 31 recommendations, eight were considered "key."

Task Force members found consistency among all payors to avoid paying the increasing cost of care. They also found too many competing interests and little effective communication among government, insurers, employers and providers. A strategy to bring these parties together was described in the first two recommendations of the Task Force. The establishment of the S.C. Health Policy Council, a private, non-profit foundation to address the issues of health care cost, access, and quality, was suggested by the Task Force. In addition, the Task Force recommended that local and regional employer health coalitions sponsored by the Chambers of Commerce be formed. The purpose of the coalitions would be the exchange and review of health data and experiences.

The Task Force was alarmed by the growing number of uninsured in this state. It was noted that 65% of all workers without health insurance were employed in businesses with fewer than 25 workers. It was also observed that healthy persons shift from expensive individual policies to cheaper policies. This leaves only sicker persons to share the risk in the expensive policies. The Task Force rec-

*From the Blue Ribbon Task Force to Study Health Care Costs in South Carolina, the McLeod Family Practice Residency Program, Florence, S.C. (Dr. Jebaily), and the College of Health Related Professions, Medical University of South Carolina, Charleston, S.C. (Dr. Jones).

**Address correspondence to Dr. Jebaily at McLeod Family Medicine Center, 555 East Cheves Street, PO Box F-8700, Florence, S.C. 29501.

ommended that the South Carolina Department of Insurance address the problem of large increases in health insurance premiums for small businesses. This should discourage or prevent insurance companies from trapping ill persons in high cost individual policies.

The problem of limited resources was studied. Task Force members realized increased spending on health care would result if all patients had access to everything that was available. This is not an affordable system of health care provision. The Task Force reasoned that the system must be reformed so that all parties recognize greater prioritization of health care services. Public education with regard to the state's limited resources and to the basic health services that can be afforded for all persons was suggested.

Recommendations were made to support better health habits. It was suggested that school boards be required to give more priority to health education instruction. This could be accomplished by mandating that a comprehensive health education curriculum be offered. This curriculum would emphasize fitness and nutrition. It was observed that South Carolina ranks 46th in the nation in overall measures of general health and 49th in life expectancy. Because the state ranks so high in infant morbidity and mortality, the Task Force recommended increasing funding for subsidized family planning services, expanding DHEC clinic hours, and contracting with other providers for similar services.

The Task Force emphasized that there is little price competition among health care providers. The Task Force suggested that the publishing of price data would initiate the normal market forces to occur that would keep providers in line with price, forcing the others "to shape up or shut down." The Task Force believed that consumers would avoid higher priced providers.

Finally, the Task Force drew special attention to the escalation of costs generated by excess capacity and expensive technology. Noting that the Certificate of Need (CON) Program has failed in cost containment efforts, the Task Force recommended that the state reevaluate the CON Program and facili-

tate ways in which it could meet its stated purpose: to eliminate excess capacity and to guide the implementation of new technology.

ANALYSIS

The report of the Task Force primarily focused on those issues over which the General Assembly has some control. The report assists in setting the stage for the health policy debate shaping in our state. It has some drawbacks, however. The first is its admitted narrow focus. Health economics and health care policy should be viewed and discussed in an environment which include the broader macroeconomic and social policy issues related to federal deficit reduction. The leading contributors to the current crisis within the health care system (ranging from the onset of the AIDS epidemic to the rapid development and utilization of complex and expensive technology) result from patterns of behavior that are national in scope. The problems of cost, access and quality that beset us have inevitably required a federal response, since no state or region acting in isolation could hope to cope with them adequately. The federal government, through its Medicare, Medicaid and Champus Programs is responsible for 40% of all health care spending. Proposals are being considered for reforming the United States Health Care System.²⁻¹⁰ Nearly three out of four Americans favor some form of a national health care program.¹¹

At the same time, the United States possesses governmental and health administrative systems that in fact verge on being non-systems. They are characterized by substantial decentralization, division of responsibilities, separation of powers, and federalism.¹²⁻¹³ There is no true central authority that can develop and implement change on its own. Any significant reform of the health care system will therefore be complex, and probably controversial. Successful implementation will require active debate that includes all regions and sectors of society.

Can we afford to discuss health policy in South Carolina and ignore these proposals without isolating ourselves? The United States Bipartisan Commission on Compre-

hensive Health Care ("Pepper Commission") will largely set the U.S. policy agenda while the annual federal budget debate will decide what will be financed. General Assembly members and physicians alike have a stake in keeping current with regard to the comprehensive and broad discussions now underway since they certainly will be directly affected by their outcome.

A clear statement describing how health care should be rationed was largely ignored. Any discussion related to access inevitably brings up the ethical and political problems related to rationing.¹⁴⁻¹⁶ Physicians in this state must be able to interpret debate over access as it really represents an analysis of rationing imperatives. Rationing takes place in all nations; nations differ only in their style of rationing.¹⁷ Implicit rationing allocates health care strictly on the basis of medical need. This approach predominates outside of the United States. Explicit rationing allocates care by price and ability to pay. This is the market approach to health care and is the one that applies to the United States system. It is predicted that unless severe restrictions are put into place which effectively increase barriers to services as a cost containment initiative, an implicit rationing system will develop.¹⁸ Oregon has initiated an access/cost, rationing experiment. A joint legislative commission prioritized conditions for which it will provide Medicaid funding. Persons would receive funding based on this prioritization. When the financing runs out, some persons with medical conditions would not receive funding for care. South Carolinians interested in these issues should study this option. Debate over such proposals will inevitably be controversial politically, but in the absence of such a debate, inaction will naturally lead to an unplanned and socially divisive struggle for health care resources. In such an atmosphere of economic Darwinism ("survival of the fittest"), the most disadvantaged sectors of society (the indigent and children in particular) will bear the brunt of scarcity in available care. It is time for the rationing debate to come out of the closet!

The Task Force noted that information on what care is appropriate and effective is difficult to obtain. As the National Leadership

Commission on Health Care has recognized, a major research effort must be undertaken to uncover and disseminate information on the highest quality and most effective clinical care methods.¹⁹ Conflict of interest has played a role in both the fee for service and HMO models.²⁰⁻²² An environment of unlimited financing resources places fewer limits on diagnostic tests and procedures. A reduction in the amount of available money changes this approach. Diagnostic tests and procedures may not be necessary to provide appropriate care. There is legitimate scientific concern that the U.S. Health Care System could reallocate a significant amount of spending from procedures to cognitive care without enduring any adverse change in quality.²³ In fact, the Agency for Health Care Research and Policy was created by the Omnibus Budget Reconciliation Act of 1989 to "enhance the quality, appropriateness, and effectiveness of health care services."²⁴ The activities of this agency should be monitored carefully as new initiatives begin to create "practice guidelines."²⁵

Finally, it is very clear that the public/private partnership referred to in this Task Force report must spell out much more realistic expectations on the part of the public. The responsibility for access, quality and cost improvement does not lie with the government alone. Individuals and families must come to terms with the limits of medicine, and with the responsibility for poor health choices.

If there is anything that can be clearly said about the debate over health care resource utilization that will take place in the coming decade, it is that a major issue will be how the allocation of resources to individuals should be affected by the choices that those individuals have made with respect to such lifestyle factors as diet, smoking, and alcohol consumption. For the general public in South Carolina, then, as well as health providers and payors, it is obvious that the 1990s will require informed discussion, hard choices, and a willingness to make necessary sacrifices. □

ACKNOWLEDGMENT

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CONTINUOUS QUALITY IMPROVEMENT (CQI): SOLUTION TO QA SHORTCOMINGS?

FREDERIC G. JONES, M.D.*

Healthcare in the United States is undergoing a paradigm shift. Arnold Relman proposes that in the decade of the 90s, medical care will evolve from a cost containment revolution to a third one of assessment and accountability.¹ Regina Herzlinger, in the *Harvard Business Review*, charges that the revolution to bring the costs of health care system under control failed when management failed to improve the quality and efficiency of health care in key areas.² The evaluation of the quality of health care is now focusing on patient (and other customer) satisfaction as well as clinical outcomes. Concomitantly, health care costs are being scrutinized at an unprecedented level. These and other considerations have led to a re-examination of existing quality assurance programs in hospitals.

Quality Assurance (QA), in fact, may be too optimistic a term. Saitz suggests that we should be more candid in understanding our limitations in evaluating, quantifying and assuring the delivery of high quality care. He suggests that using the term "quality assessment" more clearly reminds us of the actual state of the art.³ This author previously gave his perspective on the latter term.⁴ Dennis S. O'Leary, M.D., President of the Joint Commission, also feels that the word "assurance" was an unfortunate semantic selection.⁵ Those who track the JCAHO are noting the increasing emphasis placed upon "continuous quality improvement" (CQI) and the diminishing references to "quality assurance" (QA). Laffel and Blumenthal, among others, have articulated several important limitations to the traditional QA approach, including too narrow a definition of quality care, often too static and

tending to focus on physician performance and to underemphasize the contributions of non-physicians and organizational process generally.⁶

Problems with traditional approaches to QA have led a number of medical leaders to advocate a more comprehensive definition of quality and additional strategies to improve it. Donald Berwick, M.D., in a *New England Journal of Medicine (NEJM)* Sounding Board, proposes "Continuous Improvement as an Ideal in HealthCare." He characterizes two approaches to the problem of improving quality in modern American health care.⁷ One embraces the "Theory of Bad Apples" operational in many traditional QA, peer review and PRO efforts. The view is that problems of quality are caused by poor intentions, usually practitioner failures. The second approach advocates the Theory of Continuous Improvement which incorporates the Japanese concept of *Kaizen*—the continuous search for opportunities for all processes to get better. This concept emphasizes the contribution of non-physicians and organizational processes, as well as that of physicians, to the delivery of patient care. Looking at the entire "orchard," so to speak.

A recent special report in the *NEJM* by Lohr and Schroeder suggests that "the growing enthusiasm for the models of continuous quality improvement should be of special interest and appeal to the community of practitioners. Their emphasis on self-examination and self-correction is in accord with traditional views about the learned professions, and their focus on systems of care made up of many small processes. Hopefully, this reflects a practitioner's daily activities more so than do patient outcomes, which may be remote in time and place."⁸ A caveat was suggested because information about successful applica-

* Address correspondence to Dr. Jones at Anderson Memorial Hospital, 800 North Fant Street, Anderson, S.C. 29621.

tions of CQI is scant. Moreover, the statistically based industrial QI techniques so widely accepted in manufacturing circles or private industry are just now gaining acceptance in hospitals.

In *JAMA*, Glenn Laffel, M.D., nicely summarized the case for using these techniques in health care organizations. He states that the fundamental principle of industrial QI is the recognition, analysis, and elimination of variation. How can we adopt this principle to the hospital setting? It may require a complete and basic rethinking of our traditional QA approach (Table 1). Dr. David Nash hopes that being informed about industrial quality management techniques will stimulate interest in this new concept.⁹ O'Leary, of the JCAHO, applauds the shift toward CQI and states that CQI will progressively become the central theme of the new standards framework that is evolving as a major component of the JCAHO Agenda For Change.

TABLE 1

1. A new definition of quality which includes a continuous effort by all members of an organization to meet the needs and expectations of patients and other customers.
 2. Recognition that all aspects of medical care display variation and patterns of variation can serve as a framework on which to formulate quality improvement efforts.
 3. The involvement of administrative and clinical leaders who should explicitly and actively pursue an ethic of continuous improvement in the quality of care and service.
 4. An understanding that processes, not individuals, should be the objects of quality improvement and that all activities that go on between practitioners and patients need to be critically examined. In short, stop searching for the rotten apple and examine the entire orchard.
 5. Ongoing efforts to show employees how the organization defines and measures quality, and how they can participate in its improvement.
-

There are, however, skeptics who doubt that the CQI approach can be transferred to complex medical care processes or individual physician-patient relationships. Most hospitals, even those with an institution-wide commitment to quality, approach the clinical

quality improvement process with caution. Some have previously attempted to change physician practice habits through analysis, review and feedback. Not infrequently, such efforts have encountered medical staff resistance as attempts to "control" the practice of medicine. Klavolec observes that fortunately successful models are being developed, tested and refined.¹⁰ In particular the pioneering efforts of Brent James, M.D., and his team at Intermountain Health Care are noted. The results of their work suggest that the CQI process is at the heart of the hospital-physician partnership and, if properly executed, will result in a high degree of physician support and tangible benefit. CQI thus becomes a powerful tool to reinforce physicians' own commitment to quality. James recently wrote on implementing CQI in *Trustee*.¹¹ Paul Batalden, M.D., heads the Quality Resource Group of the Hospital Corporation of America and advocates CQI as a continuous process to understand the needs and expectations of patients (and other customers) and a search for ways they can be better met.¹²

In recent writings, Paul Ellwood, M.D., who coined the term HMO, advocates a further paradigm shift that calls for judging health care on the basis of results—and in terms patients and other customers can understand.¹³⁻¹⁴ Outcome information will need to come directly from patients and focus on quality of life. Ellwood and his colleague, John A. Ware, Jr., Ph.D., are developing new ways to describe the outcome of health services. The Medical Outcomes Study (MOS) tests generic health measures to provide a yardstick for assessing a patient's progress regardless of age, diagnosis, or treatment. As designed by Ellwood and Ware, outcomes management would draw on four already existing techniques for its implementation (Table 2). A recent *NEJM* Sounding Board by Arnold M. Epstein, M.D., asks the provocative question regarding the outcomes movement. "Will it get us where we want to go?"¹⁵ This article warrants your reading as a balanced assessment of the revolutionary zeal of the "outcomers" versus a natural and healthy development of Relman's "third revolution in medical care."

TABLE 2

1. It would establish guidelines for physicians to use in collecting clinical and follow-up information on patients.
 2. It would routinely and systematically measure the functioning and well-being of patients, as well as disease-specific clinical outcomes, at appropriate time intervals.
 3. It would pool clinical and outcome data on a national basis.
 4. It would analyze and disseminate results of this data collection to healthcare decision makers.
-

In the *Quality Letter*, Barry Bader reflects on how organizations are implementing CQI. This excellent review lists hospitals who are currently applying CQI to clinical processes. A danger, in his opinion, will be that hospitals may choose to implement CQI *outside* the existing QA structure. In doing so, it sets up competing approaches—QA versus CQI—instead of allowing the QA program to be an evolution to the CQI process. The methods of QA and risk management—indicator development, record review, prompt peer review, trend analysis, outcomes monitoring—have a place in the CQI approach.¹⁶ Unfortunately, according to Berwick, misconceptions about their role in the new process are turning some QA professionals off. Indeed, these QA professionals should be key players in the CQI process with their accumulated decision and technical skills and experience. During the transition to CQI, QA professionals and physicians will be challenged to learn new skills, new approaches and vocabularies. This author, as well as Berwick and others, is convinced that CQI and QA are nearly identical activities. Furthermore, CQI and peer review are quite compatible, according to Berwick. Practice guidelines and clinical indicators now under development will become tools to provide effectiveness data to the CQI process and contribute to achieving cost effective performance.¹⁷

A number of hospitals agree with Williamson that in order to achieve actual improvement in quality, the QA effort should be internally motivated, with the responsibility for ensuring quality of care placed as close to

the bedside as possible, and that CQI must be comprehensive (everyone involved). Finally, the methods of assessment and improvement must be adapted to priority problems.¹⁸ For the stated reasons, hospitals have designated physicians to play a key role in implementing quality improvement processes. The goal is to build on traditional QA programs, using QA personnel as key players. In a number of hospitals, these efforts are facilitated by administratively oriented physicians who operate at the interfaces of the medical staff, administration, and governing body. Their titles are varied—most commonly director or vice president of medical affairs. These medical professionals embrace a discipline that permits recommendations for using hospital resources to deliver the patient care that quality assessment and outcomes management dictates. Ellwood feels “if traditional medical organizations and their medical staffs don’t gain control of the provision of patient care, purchaser organizations will.”

However, as Dr. Martin Merry warns, physicians may see this movement as coming from outside the profession and might oppose it even if articulated and supported by respected leaders from within our own ranks. Quality leader Joseph M. Juran describes an *immune* response to CQI even in *normal* organizations. Merry is concerned that physicians may prove to be the *killer lymphocytes* opposing the implementation of this process in their hospitals.¹⁹ This author believes hospitals are especially prepared to accept this paradigm of CQI. Hospitals have large, well-educated professional staffs. Each of these staff members—physicians, nurses, technologists—have a well-founded understanding of variation, scientific methods, and statistical analysis.

It appears that hospital quality plays an important role in choice of hospital.²⁰ It is proposed that by adopting the process of CQI, hospitals will have a systematic approach to measure expectations and design ways to meet them. A rallying point to patients and physicians will be the hospitals’ commitment to quality. It is most important that valid quality information is available to document the delivery of high quality patient care. CQI

promises to change traditional relations in the hospital and to orient efforts toward the patient and the clinical processes.

SUMMARY

In the previous decade, quality assurance gained prominence in an effort to ensure optimal medical care. Some experts, as Avedis Donabedian, M.D.—a leading scholar in the area of quality assessment—characterized its dimensions as falling into three categories: structure (inputs), process and outcome.²¹ Paul Ellwood, M.D., in 1988, further promoted the latter by introducing an “outcomes management” system. Now Berwick, James, O’Leary and others advocate the incorporation of certain industrial insights advocated by Deming, Juran and others to improve traditional QA Methods and develop a process of Continuous Quality Improvement (CQI). The goal is to have patients (and other customers) better served.

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Editorial

The following editorial addresses the nursing shortage. Guest editorials reflect the opinions of the authors and do not necessarily reflect the opinions of the officers and trustees of the South Carolina Medical Association.

—CSB

MEDICINE'S GREATEST PROBLEM

There are many problems facing medicine today, just as there have been in the past. This is to be expected, and as long as we continue to practice medicine, there will be different issues that require our attention. In my mind the greatest problem facing our profession today, as a whole, is a growing shortage of nurses. Over the past decade I have watched the shortage develop and become more acute, until it now appears to be reaching a critical stage.

Awareness about the nursing shortage has grown just recently because hospitals have been reluctant to reveal their shortages. Administrators fear that any admission of a staffing problem will scare the public away from their institutions because of the implication of a lower standard of care. However, if you look in the classified ads section of any newspaper, you will see that there are few if any hospitals that are not advertising for staff nurses in various departments. Further surveys aren't necessary to determine the scope of the shortage: it exists and it is serious. Worse yet, there are no programs on the drawing board that will begin to correct the problem.

In the 1940s we faced a comparable dilemma when there was a serious physician shortage. Measures were taken to correct this on a state as well as national level, and established medical schools helped ease the problem by expanding their programs. The various efforts undertaken to address this particular problem appear to have been successful, although admittedly the distribution of physicians throughout the country is still not ideal.

Before looking at possible solutions to the problem, we must first ask ourselves, "Why

the shortage?" Here in South Carolina a total of 800 nurses graduated from the various Associate Degree, Registered Nurse Diploma and Bachelor of Science programs in the state in 1976. Ten years later the total was 900. Where are these nurses working?

As always many of the graduates pursue jobs in physicians' offices, public and private schools, or go to work with the public health department. Several join the armed forces. (Incidentally, graduating residents haven't helped the situation by choosing nurses for spouses, which automatically does away with 198 of our nurses a year.)

Recent graduates now have more job opportunities outside of hospitals than ever before. Industry has cornered a share of the "market," employing their own nursing staffs. Insurance companies employ nurses for screening purposes as well as to review hospital admissions, and nursing homes also draw from the pool of available nurses. In addition, many registered nurses go to work for social services.

By far and away, however, the visiting nurses programs have drawn the greatest percentage of potential hospital employees. The proliferation of these programs in recent years, while serving a need in the dispensation of medical care, has placed hospitals at a great disadvantage in the recruitment of staff nurses.

Within hospitals, more and more administrative posts are opening up for nurses, and many of the best people go on for further study to become nurse anesthetists.

When considering all these employment opportunities available for nurses today, there is one significant distinction to be noted be-

tween hospitals and other employers. Only hospitals aid in the training of nurses. Their clinical experience, a requisite of all the programs of study, is not garnered through a visiting nurse program or at some industry. The hospitals offer their resources and time in a commitment to produce trained professionals, who then forsake them, so to speak, to work in greener pastures.

To begin to address the problem of a nursing shortage, we must look at the type of nurses that are being trained and can be trained. The Bachelor of Science (BS) nursing program requires four years of education and training, the Associate Degree (AD) program consists of two years of education and training and the Licensed Practical Nurse (LPN) completes one year of education and training. The LPN programs have produced excellent hospital nurses, but seem to be downgraded by all accreditation boards.

In the meantime, many staff nursing positions are unfilled. Hospital administrators fear that any criticisms of nursing performance will result in resignations. Programs to attract older nurses back to work have not helped and the Bachelor of Science program graduates are looking for 9:00 to 5:00 positions.

The nursing shortage has created such an urgent need for nursing personnel that I believe expanding the Associate Degree programs is our best plan of action to pursue. I know that here in the Florence area the AD program at the Florence-Darlington Technical College produces excellent nurses. It is of note that one hospital administrator who indicated to me approximately one year ago that he could not use AD nurses because of the high technology at his institution has recently gone overboard trying to recruit every AD graduate from the college. He must have had a change of heart.

Over the last several years, Florence-Darlington Technical College has increased the number of graduates from its Associate Degree nursing program from 32 a year to 164. This change was brought about with the help of Mr. Fred Fore, former president of the college, Ms. Billie Boette, Dean of Health Studies, Mr. David McLeod, the late mayor of Florence, Senator Rembert Dennis, and the hospitals in the Florence area. I am sure that we need further increases here in the Pee Dee

area, *but an expansion of programs statewide is needed to correct the nursing shortage problem.* Enrollment must double, even triple, in the immediate future before the situation becomes even more critical.

While an expansion of the AD programs is a viable solution to the problem at hand, some groundwork needs to be done starting immediately. We have talked about doubling and even tripling enrollment and to accomplish this an aggressive recruitment campaign geared toward high school students must be implemented to pique their interest and sell them on the professional rewards that abound in nursing. This alone, however, will not be enough to fill the chairs in the classrooms.

Scholarships must be offered to attract the bright, dedicated students who might choose another career because of limited financial means. Further, these scholarships should be offered by industry, insurance companies, nursing homes, the visiting nurses programs and all the other employers who hire potential hospital nurses, thereby contributing to the nursing personnel shortages which result in escalating costs that are passed along to the public. Hospitals have already begun offering a limited number of scholarships.

I urge you to evaluate this problem, talk with those around you concerning its severity, and help us act upon it. One recommendation would be for you to contact the board members of the State Board for Technical and Comprehensive Education and urge that the Associate Degree nursing programs at the technical colleges throughout the state be expanded. This board is the umbrella governing body for these schools. The names and addresses of the board members are listed in the Table. If you take but an hour to make a personal contact with one of these persons, you will be positively impacting medicine's greatest problem.

FRANK B. LEE, SR., M.D.
Florence General Hospital
512 S. Irby Street
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AN ESSAY ON INOCULATION: DR. JAMES KILLPATRICK

Dr. James Killpatrick (or Kilpatrick or Kirkpatrick), an irascible Irishman, arrived in Charleston around 1718. In 1738, the *London Frigate* arrived from Africa with a cargo of slaves, and introduced into Charleston an epidemic of smallpox which “spread so extensively that there were not a sufficient number of persons in health to attend the sick, and many persons perished from neglect and want. . . . There was scarcely a house in which there had not been one or more deaths. Inoculation was at this time first attempted with some success and . . . the disease soon after abated.” Killpatrick’s interest in inoculation which had been introduced into South Carolina by Mr. Arthur Mowbray, a British naval surgeon, was probably heightened by the death of his young son early in the epidemic. He became an avid supporter and practitioner of the craft. He advocated a method which used a virus from another inoculated person rather than from a natural

case of the disease. Killpatrick claimed a mortality rate among inoculated cases of 3.6 percent while the figure for “natural” cases was 17.6 percent. In spite of this apparent success, inoculation was banned in the area shortly after the epidemic and Dr. Killpatrick departed for London, where he changed his name to Kirkpatrick (to avoid the embarrassing “plays” that could easily be made on the original spelling?) and became a fashionable and famous inoculator.

Dr. Killpatrick was a prolific writer, not only of things medical, but of poetry in both Latin and English and of a series of satirical pamphlets in which he and his neighbor, Dr. Thomas Dale, another prominent physician, berated each other in a facile and biting fashion over the handling of a medical case. He also translated several of the works of Tissot, liberally adding his own ideas in footnote.

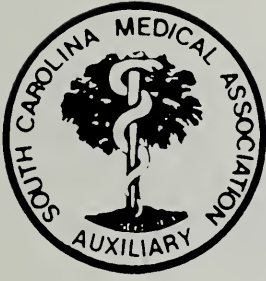
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Auxiliary Page

PHYSICIANS' FAMILY SUPPORT COMMITTEE SCMA AUXILIARY 1990-91

The Physicians' Family Support Committee of the South Carolina Medical Association Auxiliary is striving at both the state and local levels to provide its members and their families support and assistance in times of need. Our projects may be short term, to fill an immediate family need in a crisis situation, or long term, expanding the role of our caring staff to create good will among our auxiliary family.

We have made available to our auxiliary members many excellent publications that can be used as resources to help families in times of personal need. Excellent reading lists for the Caduceus spouse have been distributed. Through an awareness program and personal communication, our members are becoming familiar with the important functions of the South Carolina Medical Association Physicians' Advocacy and Assistance Committee. It is my responsibility to serve on this active committee.

As physicians are called to active duty to help in the Persian Gulf crisis, the Physicians' Family Support Committee has responded and communicated our concern and support to those physician families.

In cooperation with the South Carolina Medical Association Auxiliary AMA/ERF effort, we are requesting contributions to demonstrate concern to grieving medical families. This is a thoughtful and special way to show our caring.

Our goal for this year and ensuing years is to reach each medical family to let them know that we can be there for them if they need us.

LINDA GALPHIN (MRS. ROBERT)
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LAPAROSCOPIC CHOLECYSTECTOMY: A TIME FOR REFLECTION*

DAVID B. ADAMS, M.D.**

FREDERICK L. GREENE, M.D.

Over the 108 years since Langenbuch first successfully removed the diseased gallbladder,¹ no surgical procedure performed on the biliary tree has aroused such interest or emotion as engendered by removal of the gallbladder percutaneously using camera-guided laparoscopy.

This procedure, initially reported by French,^{2,3} and American⁴ surgeons within the last three years, has swept the United States at a rapid and, at times, frenetic pace spurned on by the desires of patients, instrument makers, and hospital marketing departments. General surgeons across the land have rapidly embraced laparoscopy, using either LASER or electrocautery techniques and have flocked to courses demanding tuitions of \$3,000.00 and more in order to learn this method of gallbladder removal. Most surgeons have rapidly transferred this initial course experience to successful gallbladder extirpation in the operating room. Those surgeons who have not begun to perform this new approach to cholecystectomy will have to either accept that some of their patients will seek surgical

consultation from practitioners who perform laparoscopic removal or will be enticed to learn the procedure because of their desire to keep current and to avoid the economic consequences realized by loss of patient referrals.

Laparoscopic cholecystectomy, an innovative technique for removing the gallbladder through a small puncture wound in the abdominal wall, has produced immense interest in the lay press in South Carolina and nationally. Adapting methods used in laparoscopic gynecologic surgery, this method of gallbladder removal involves four trochar puncture wounds, video camera display, blunt and sharp laparoscopic dissection, use of a laparoscopic clip applier, and retrograde gallbladder dissection with laser or electrocautery heat energy. In a pattern which has become typical for the introduction of new technology, surgical therapeutic choices are rapidly directed and driven by patient and market forces.

Dubois and colleagues² recently published a preliminary report on 36 cases of laparoscopic cholecystectomy. Thirty-nine patients underwent laparoscopy in their early series. In three of these cases, open cholecystectomy was eventually performed because of the finding of acute inflammation in the gallbladder. The remaining 36 patients underwent endoscopic cholecystectomy with two complications reported. One occurred during the procedure and was related to cystic artery

*From the Department of Surgery, Medical University of South Carolina, Charleston (Dr. Adams) and the Department of Surgery, University of South Carolina School of Medicine, Columbia (Dr. Greene).

**Address correspondence to Dr. Adams at the Department of Surgery, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S.C. 29425-0901.

bleeding which required a laparotomy for prompt control; the second complication occurred 48 hours after operation when the patient required laparotomy for evacuation of a bile collection whose source was undefined. The 34 patients having an uncomplicated postoperative course were reported to be pain-free within 48 hours and were discharged between the third and seventh postoperative day.

At the annual meeting of the Society for Surgery of the Alimentary Tract held in May 1990, in San Antonio, Zucker and colleagues reported their early experience with laparoscopic cholecystectomy at the University of Maryland. In the initial 27 patients in whom laparoscopic cholecystectomy was attempted, three required laparotomy. Hospital stay ranged from outpatient surgery in four patients to two days, with an average stay of less than one day. Return to normal activity ranged from two to eight days with a mean of 4.2 days. Laparotomy was required early in their experience because of (1) the discovery of an unsuspected pancreatic tumor, (2) injury to the cystic duct stump and (3) a common bile duct injury. An additional 73 patients were evaluated and over a seven-month period, laparoscopic cholecystectomy was performed in a total of 100 patients. There appeared to be a learning curve associated with the need to convert laparoscopic to an open cholecystectomy in that only two additional patients required laparotomy in the most recent series.

Since 1886, when Justus Ohage of St. Paul, Minnesota, first performed cholecystectomy in the United States, the morbidity and mortality of this procedure has improved. In series reported over the past 20 years, mortality rates for elective cholecystectomy have varied from 0 to 0.8 percent,⁵⁻¹⁰ and two large series reported over 1,400 patients with no mortality.^{8,9} Why would improvements or alternatives to an ideal operation that has a zero percent mortality and is curative of the underlying disorder in 100 percent of the cases be needed? One answer relates to the economics of biliary tract disease. Approximately 20 million people in the United States have gallstones and the medical costs and work

days lost secondary to 300,000 cholecystectomies annually are substantial.¹⁰ Although the average hospital stay of six days has been decreased in recent years,¹¹ laparoscopic cholecystectomy offers a means to reduce the hospital stay further and even to perform outpatient cholecystectomy. Patient satisfaction in avoiding the discomfort of a surgical incision and a patient's ability to return to work are driving forces which make laparoscopic cholecystectomy attractive to patients and the entire health care community.

The Achilles heel of laparoscopic cholecystectomy, however, may become an increase in extrahepatic biliary ductal injury. Twenty-three years after the first cholecystectomy, William J. Mayo authored a report entitled "Some Remarks on Cases Involving Operative Loss of Continuity of the Common Bile Duct."¹² Operative injury to the common bile duct continues to be an uncommon, but serious, problem well-summarized in a Swedish experience with 65 patients who had accidental lesions of the common bile duct at cholecystectomy in the period from 1975-1982.¹³ The Swedish National Health Service has access to records on all patients with major operative complications so that the incidence of common duct injuries reported represents a good estimation of the incidence of this complication with standard cholecystectomy. Their reporting of seven ductal injuries estimated per 10,000 cholecystectomies is similar to the incidence estimated in this country,¹⁴ which is reported to approximate 0.5 percent.

Experience was felt to be a factor involved in common duct injury in Sweden. In addition, biliary tract anomalies were present in only 16 patients and injury occurred before cholangiograms were performed in 27 of 65 patients. Unfortunately, the outcome in patients who have sustained extrahepatic ductal injury following cholecystectomy is generally not favorable. It is for this reason that prevention of ductal injury in open cholecystectomy, and now in laparoscopic cholecystectomy, must be a goal for all practitioners. Just as the case in open cholecystectomy, it is when the surgeon perceives that he or she has an "easy" cholecystectomy that the situation

leading to a higher incidence of ductal injury occurs. This will be the exact situation which occurs nationally when surgeons embark on performing "easy" cholecystectomies with a technique with which they are inexperienced and which is a departure from the usual techniques of open cholecystectomy. Although stereoscopic vision and tactile information are absent in laparoscopic surgery, there are potential advantages to laparoscopic cholecystectomy in that a magnified view of the operative field is provided and, through the maintenance of appropriate pneumoperitoneum, excellent visualization of the gallbladder and the extrahepatic ductal region is possible.

The indications and contraindications for laparoscopic cholecystectomy continue to evolve. The Society of American Gastrointestinal Endoscopic Surgeons (SAGES), which represents the surgical endoscopist and now an increasing number of surgeons performing laparoscopy, has published guidelines for indications and contraindications for the procedure as well as information which allows surgeons to select well-structured courses which give maximum benefit to the laparoscopy neophyte. SAGES has also supported the development of a national prospective study which will include several university centers. This study will hopefully place laparoscopic surgery on a more scientific footing in regard to indications and outcomes during the next several years. We must also closely assess the impact of "endoscopic" cholecystectomy on the potential decreased opportunities for our surgical residents to learn and perform "open" cholecystectomy. As the academic surgical community embraces laparoscopic surgical techniques, the possible consequences on the teaching of conventional surgical approaches must be carefully assessed.

Although the true role for laparoscopic gallbladder removal continues to evolve, our patients and their desires continue to be a driving force behind the introduction of this technique. The patient who is free of postoperative pain, discharged from the hospital within one to two days of operation, and returns to full activity and employment in sev-

eral days will be an enthusiastic supporter of this concept. The benefits to those who pay the bills in our health care system are obvious. In a recent editorial, Cuschieri and colleagues¹⁵ prophetically stated that an explosion in laparoscopic surgery is imminent. Laparoscopic cholecystectomy is only the beginning of what has been termed "minimal access surgery" which also includes the now well-accepted procedures of endoscopic polypectomy and percutaneous endoscopic gastrostomy (PEG). The potential benefits of laparoscopic cholecystectomy are substantial and will ultimately depend upon achieving a zero percent mortality rate for elective cases with less than seven common duct injuries per 10,000 cases. Recommendations have been proposed that laparoscopic cholecystectomy should be confined to specialized centers which participate in concurrent or planned prospective studies designed to optimize the technique and carefully refine its indications.¹⁵ Other new technological developments in surgery, however, have not followed this course. Although it is said that a surgeon should wait five years before adopting a new operation, the benefit to potentially 300,000 patients undergoing cholecystectomy every year will not make this a reality. Independence and ingenuity have marked the introduction of new technologies into surgical practice. Sound techniques and principles will not wait for the results of controlled, randomized prospective trials.

When we evaluate new treatments for cholelithiasis, Lawson Tait's assessment of Langenbuch's surgical innovation, cholecystectomy, should be remembered. Tait, one of the most prominent surgeons of his day, cautioned that "The entire possibilities of the treatment of gallstones and distended gallbladder are exhausted ... (with cholecystostomy) ... no further experimentation such as that of ... Langenbuch seems desirable."¹⁶ Who will eventually benefit from laparoscopic cholecystectomy? The answers are not readily available. It is clear, however, that patients with symptomatic cholelithiasis and the entire health care delivery system may be winners in the thoughtful application and introduction of this technique. The final an-

swers will ultimately be provided by our patients and the peer-reviewed surgical literature. □

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EXTRACORPOREAL MEMBRANE OXYGENATION IN THE NEONATE*

T. DAVID MARSH, M.D.**

M. SHARADA PAI, M.D.

TOM L. AUSTIN, M.D.

MARIXIE Q. LEONOR, M.D.

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FOSTER MARSHALL, II, M.D.

R. PRITHVI REDDY, M.D.

JAMES G. GLASSER, M.D.

Advances in neonatal intensive care have dramatically lowered the mortality for low-birth-weight infants. However, infants continue to die, especially from respiratory failure. Some of these infants are otherwise potentially salvageable. This paper addresses a new technique—Extracorporeal Membrane Oxygenation (ECMO)—aimed at the term or near term newborn with potentially reversible pulmonary disease.

DESCRIPTION OF ECMO

ECMO is a modified heart-lung bypass system used in moribund neonates with potentially reversible lung disease. Newborns who are candidates for ECMO must have an 80 percent or greater predicted mortality using conventional therapy, have a gestational age greater than 34 weeks, and have a birthweight of two kilograms or greater. Contraindications to the use of ECMO include: (1) severe asphyxia, (2) irreparable congenital malformations, (3) cyanotic congenital heart disease, (4) chronic lung disease, and (5) grade II or larger intraventricular hemorrhage (IVH). The most common diagnoses of newborns requiring ECMO are persistent pulmonary hypertension (PPHN), meconium aspiration syndrome (MAS), sepsis, congenital

diaphragmatic hernia (CDH), and hyaline membrane disease (HMD). As of January, 1990, over 3,000 neonates in the U.S. have been placed on bypass with a survival rate of 83 percent.

Bartlett et al. reported the first successful use of ECMO in a newborn in 1975 and subsequently in phase I trials (1975-1980) a survival of 55 percent (22/40). Although use of a single cannula veno-veno bypass may increase in the near future, venoarterial (VA) bypass is most commonly used now. VA bypass is performed by placing a catheter in the right common carotid artery and a second catheter in the right internal jugular vein (Figure 1). Poly Vinyl Chloride (PVC) tubing connects a servo regulator pump, membrane lung, and heat exchanger to the two catheters.

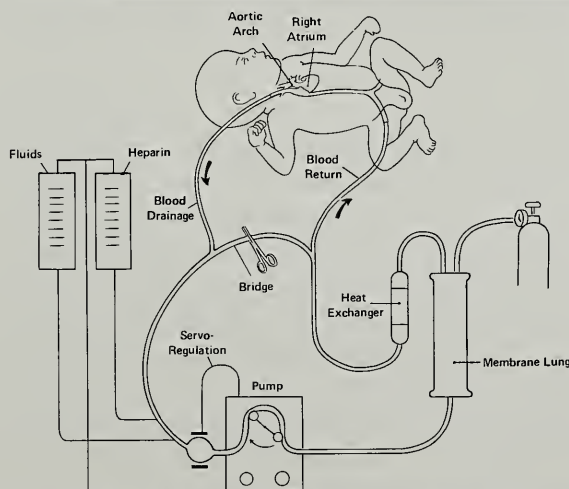


FIGURE 1. Circuit diagram for venoarterial ECMO.
With permission from Robert H. Bartlett, M.D.

*From the Departments of Pediatrics and Surgery, University of South Carolina School of Medicine and Richland Memorial Hospital, Columbia.

** Address correspondence to Dr. Marsh at the Department of Pediatrics, 3 Richland Medical Park, Suite 400, Columbia, S. C. 29203.

The first component of the circuit is the bladder box assembly. The bladder box is a safety device in the circuit which prevents the pump flow from exceeding the venous blood return. Blood then goes to the roller pump and then on to the SCI med oxygenator. The oxygenator consists of two compartments divided by a semipermeable membrane with oxygen on one side and blood on the other. As the blood passes the membrane, oxygen is added and CO₂ is removed. The blood is then heated and returned to the baby. The final component of the circuit is a bridge connecting the arterial and venous sides. During bypass the bridge is kept clamped. The purpose of the bridge is to allow the patient to be temporarily removed from bypass by unclamping the bridge and clamping both the arterial and venous catheters just proximal to the insertion in the neck. This is needed should there be any mechanical problems with the circuit and also in assessing the baby's readiness to be decannulated.

Once a decision has been made to place a patient on bypass, the circuit is primed with approximately 400 ccs of reconstituted blood. Cannulation is performed in the Neonatal Intensive Care Unit. The patient is anesthetized with Fentanyl or Morphine and paralyzed with Pavulon. After exposure of the vessels, a Heparin bolus of 100 units per kilogram is given and a transverse arteriotomy and venotomy are made. The catheters are then inserted. Catheter sizes range from 8 to 14 French. Since bypass flow is primarily dependent on the diameter of the venous catheter, every effort is made to place the largest catheter possible. The patient is then connected to the circuit and the pump flow is gradually increased. Most patients initially require 100 to 120 ccs per kilogram per minute of bypass blood flow to achieve adequate oxygenation. The patient's ventilatory settings are decreased to allow for lung rest (room air, frequencies from 10 to 20, positive inspiratory pressure from 18 to 20, and positive end expiratory pressure from 2 to 4). The patient usually continues to require sedation in the form of Morphine or Fentanyl during bypass, however, paralyzing agents and inotropic drugs such as Dopamine are discontinued. To assure

that the patient is receiving adequate oxygenation, arterial blood gases and pulse oximeter saturation are monitored from the patient and mixed venous saturation is monitored on the venous side of the circuit.

Because of the risk of clot formation in the circuit, patients are maintained on a heparin drip in the range of 20 to 60 units per kilogram per hour. Hourly activated clotting times are measured and kept in the range of 240 to 280 seconds. Serial platelet counts and hematocrits are also measured. Platelet counts are kept greater than 75 thousand to decrease the risk of bleeding and hematocrits are maintained above 40 to ensure adequate oxygen delivery. Daily head ultrasounds are obtained on patients while on bypass to make sure that there is no Grade II or larger intraventricular hemorrhage. Trained ECMO specialists watch closely for any evidence of clots or air in the circuit. Once patients are placed on bypass they receive relatively high flows for the first two or three days on bypass and then over the next two or three days they can be weaned to decannulation. Decision to wean the patient is based on the patient's degree of oxygenation. The pump flow is decreased 10 to 20 ccs per hour. As flows reach 100 to 150 ccs per minute, the patient's ventilatory settings are increased slightly with FiO₂ ranging between 30 and 50 percent, PIP increased up to 24, and frequencies increased in the 30 to 60 range. Once the patient reaches 50 ccs per minute of pump flow, the patient is considered at "idling." The patient remains at 50 ccs per minute for three to four hours. If the patient tolerates this period of "idling" the arterial venous and cannulas are clamped and the clamp on the bridge is removed, thus separating the patient from bypass. This is termed a "trial off." If patient tolerates a "trial off" for 30 minutes with adequate oxygenation, the patient is ready for decannulation.

Complications from ECMO involve both short and long term risks. Long term risks involve the unknown effects of ligation of the right common carotid artery and the right internal jugular vein. Potential short term mechanical complications include oxygenation failure, pump malfunction, tubing rupture, and clots and/or air in the circuit. Although

bleeding at the cannulation site is common, this can be easily treated and poses no major problems to the neonate. However, the incidence of severe intracranial hemorrhage is approximately 10 percent and requires emergency decannulation of the patient.

REPORT OF EXPERIENCE

The Children's Hospital at Richland Memorial began accepting patients for ECMO in September of 1988. There were 19 patients placed on bypass as of January 31, 1990, with the following diagnoses: MAS (8), CDH (3), PPHN (3), sepsis/pneumonia (2), and HMD (1). Additionally, there were two other patients with congenital heart disease. One patient had a dysplastic tricuspid valve and a second patient had total anomalous pulmonary venous return (TAPVR).

Initially, the patient with dysplastic tricuspid valve was felt to have pulmonary hypertension, since these two conditions are very similar. The patient with TAPVR was suspected of having congenital heart disease, however, the patient was too unstable for transport. Both patients were successfully decannulated (the patient with TAPVR required surgical repair prior to decannulation). Average gestational age of all patients was 39 weeks with a birthweight of 3.2 kilograms, and age at cannulation of 34 hours. There were 15 survivors and four deaths, for a survival rate of 79 percent. Duration of bypass for the survivors was 129 hours with a range of 67 to 188 hours. Duration of bypass for the deaths averaged 88 hours with a range of 16 to 253 hours. Of the four deaths there was one patient with CDH who died from his hypoplastic lungs. There was one patient with pneumonia who developed a bilateral grade III intraventricular hemorrhage while on bypass and was decannulated at that time. There were two other patients both with meconium aspiration syndrome and multi-organ system failure which in retrospect, were terminal prior to cannulation.

Hours to extubation for the survivors was

a mean of 119 with a range of 19 to 936 hours. There was one patient who had a congenital diaphragmatic hernia who remained on the ventilator for 936 hours. Excluding this patient, the other 14 survivors had a mean time of 60 hours from decannulation to extubation with a range of 19 to 171 hours. Of the 15 survivors, six were transferred back to the referring institution and nine were discharged home from our institution. Average age at the time of transfer was 12 days of age. Average time for discharge for the patient sent home was 30 days of age. Excluding the patient with the CDH, mentioned previously with the prolonged hospital stay, the other eight patients who were sent directly home were discharged at 19 days of age with a range of 14 days to 26 days.

Two areas of future development for ECMO include Veno Veno bypass and heparin coated circuits. There is currently a multi-center study going on in this country using Veno Veno ECMO. The catheter is a single catheter with two lumens. This catheter can be placed in the right internal jugular vein and thus avoids carotid artery ligation. This catheter should be available here at the University of South Carolina School of Medicine in the near future. The second area of interest is use of heparin bonded circuits. Because babies less than 35 weeks gestation are at increased risk of intraventricular hemorrhage, even without ECMO, the use of a heparin bonded circuit will avoid systemically heparinizing these babies and thus be a potentially life saving modality in these smaller babies.

SUMMARY

ECMO is a modified heart-lung bypass system for treatment of moribund neonates. The techniques are described. Our experience with 19 patients reveals a survival rate of 79 percent. In the future, with advances in technology, ECMO may become less invisible and extended to a larger population of newborns. □

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EMOTIONS AND THE PROCESS OF ETHICAL DECISIONMAKING*

JULIA E. CONNELLY, M.D.**

In the early months of 1990, I was asked to present the Leonard Douglas Memorial Lecture at the annual meeting of the South Carolina Medical Association. The theme was to be medical ethics, and my task was to select the specific topic. Questions involving issues of medical ethics often originate from the patient-physician relationship—refusal of treatment, issues of confidentiality. Yet, other issues begin within the medical community—the hospital's informed consent policy about testing for AIDS—and some issues reflect national concerns—the allocation of scarce resources and access to health care. The possible choices for such a lecture were unlimited. I decided to discuss the issue of emotions and ethical decisionmaking. Why emotions? Emotions are an integral component of the medical practice. They influence all physicians: internists, surgeons, family practitioners, pediatricians, specialists and generalists. They impact on all patients. Emotions arise commonly within relationships and may offer unexpected opportunities for helping the patient.

Yet, emotions run high in these days of patient dissatisfaction, diminished trust between patient and physician, unbelievable technological capabilities for prolonging life, and shared decisionmaking. Many of the emotions that we experience in medicine today are uncomfortable ones—fear, frustration, disappointment. Differences of opinion, beliefs, and expectations are frequent and they often lead to interpersonal conflicts and emotional reactions. Several questions I wanted to address were: How do emotions relate to medical ethics? How can we best use emotions to advance our therapeutic efforts?

Can attention to emotions enhance decision-making and improve the practice of medicine? I intended for this lecture to be practical and hopefully useful to practicing physicians.

Emotions affect many aspects of the interactions between patients and physicians. The first hint that something is wrong may be discovered in the emotional context of the situation. Sometimes emotions signal the presence of a conflict which, more likely than not, involves an ethical dilemma. Understanding the source of the emotion is often challenging because patients *and* physicians bring emotions to the relationship. Emotions may also arise as family members, staff, and other professionals become involved in the patient's care.

Despite the fact that emotions are common, they still receive bad press. A myth even exists that attempts to diminish the clinical importance of emotions by labeling them as irrational, overwhelming forces that limit our capacity to evaluate objectively. The myth suggests that we suffer from our emotions, submit to them, and find ourselves carried away by them; and that because of our emotions we behave foolishly.¹ How does this myth discount emotions in the clinical setting?

For years Western thought has been dominated by the powers of rationality. Many individuals have pondered the differences between science and humanity. Often they conclude that science, based in objectivity and reason, contains the truth, while other aspects of humanity are only subjective or "soft" sciences. It is not surprising then that this myth, that discounts emotions, exists. Some contemporary philosophers argue that "nothing fogs the mind so thoroughly as emotion"² and that decisions should be made on "consistency and force of rational argument."³

However, elimination of emotions in decisionmaking leaves out an important clinical reality, so others have begun to dispel this myth. Callahan proposes that physicians use a model for their decisionmaking that incorpo-

*The Leonard Douglas Memorial Lecture presented at the 142nd Annual Meeting of the South Carolina Medical Association, Charleston, S. C., April 26, 1990.

**Address for correspondence: Department of Internal Medicine, University of Virginia School of Medicine, Box 494, Charlottesville, VA 22908.

rates the "mutual interaction of thinking and feeling."⁴ If a decision is being made on facts alone, we should ask: Are emotions being excluded? What emotions should be included in the decisionmaking process? If on the other hand, a decision is based primarily on emotion, the process should be questioned: What role should reason play in this process? How can emotions and reason be used to balance decisionmaking?

Several weeks before I presented this paper I had dinner with one of our residents, my advisee. As I told him what I was working on, he dropped his head and said that he had just begun to understand how much his emotions influence his practice. He told me about an elderly patient with end-stage pulmonary disease who was not liked by the staff or by himself. The patient was disruptive, demanding and generally obnoxious. When the patient was found lying in the floor in cardiac arrest, the resident was suddenly confused about the best response to the situation. Should he allow the patient to die or should he begin CPR knowing that intubation might result in a patient who was impossible to wean from the respirator? The medical decision was hard enough, but he was bothered most by the feeling that he did not like the patient. If he chose not to initiate CPR, was it because he realized that the patient's death would relieve him (the resident) of his frustration and bitterness? He questioned whether this was the best choice for the patient and quickly asked for advice. His potential decision was based solely on his emotional reaction.

When we avoid emotions we miss opportunities to enrich our relationships and to improve the medical care that we provide. Perhaps we diminish the joy of practicing medicine. Addressing emotions may turn a painful experience into one of respect and compassion. Michael Redetsky writes about "sudden intimacies" as he tells about a young boy with Histiocytosis X who dies in the intensive care unit. Radetsky questions:

"What fulfills the physician? Certainly the diagnostic challenge, the financial security, the grateful thanks. No for me fulfillment comes from the sudden intimacies

with total strangers—those moments when the human barrier cracks open to reveal what is most secret and inarticulate. A word can betray the deepest emotions. A look can reflect the world of feeling. Illness strips away superficiality to reveal reality in etched detail. This revelation can fuse together desperate lives in unexpected kinship. The physician who cares can rejoice in this moment."⁵

Enjoyable emotions—compassion, joy, happiness—are emotions of attraction. They bring people closer and facilitate trusting relationships. Working through painful situations often results in shared and enjoyable emotions, even a sense of relief may be rewarding. Patient satisfaction increases when communication is clear and perhaps improves even more when emotions are explored, rather than avoided.

There are several clinical themes that perpetuate the "myth" about emotions. One theme is the label that some emotions are positive and others are negative. In our society many emotions have negative connotations, such as anger: anger is bad and should be avoided. This idea limits our willingness to express anger, when such catharsis might be healthy. Another theme is the tendency to avoid emotions. Sometimes emotions such as anger, sadness, guilt are painful. They cause aversion and withdrawal, at times when closeness and compassion are needed. And another theme relates to our ability to establish empathetic relationships. Again, it is sometimes too much to "take on" emotions as we may be fearful that they will overwhelm or require too much time. We may also be concerned about opening Pandora's box and not having the expertise to close it once again.

Ethical dilemmas frequently involve conflicts and conflicts usually involve emotions. The initial response to such a situation may be emotional ... simply a feeling of tension, uncertainty, confusion or frustration. These emotions allow recognition of the ethical problem. And it is often a good idea when these feelings arise to ask yourself "Is an ethical dilemma present? What is it? Where is the conflict?"

Many ethical problems are accompanied by painful emotions—emotions of conflict. Emotions such as distrust, dissatisfaction, suspicion result in distancing and avoidance. Because emotions are predictable in some situations, we can learn to anticipate them and to develop skills for facilitating their expression and resolution. This allows early and effective communication and often turns painful emotions into those of mutual understanding, respect, and trust.

Henry David Aiken's work offers a framework that helps integrate emotions into the process of making clinical decisions. He defines the levels, perhaps dimensions is a better description today, of moral discourse as emotional, moral, ethical, and post-ethical.⁶ Clinically the first three are most helpful. The emotional dimension is the most personally specific and is determined by the beliefs, values, experiences, education of the individual. It is often a "gut-reaction"—reactive and impulsive. This dimension is inherent in all persons—patients and physicians. The moral dimension is less individually specific and more culturally or community determined. In this dimension the facts of the situation need to be considered and the standard of care reviewed. The question, "What ought I do in this situation?", often clarifies the options. The ethical dimension is based on broad, general principles that are stable among cultures and through time. This level requires reflection of the decisions made in the moral level. The question, "Why is that decision best?", requires reflection on the principles of biomedical ethics: autonomy, beneficence, non-maleficence, and justice.

Once the process of decisionmaking begins it is helpful to review the facts and indications for treatment; explore the preferences of the patient; consider the contextual factors such as the family, the economic, legal and social issues; anticipate, recognize and explore emotions as they arise, identify the ethical problems (often the source of conflicts), consider the ethical principles that guide the decisions, review Aiken's dimensions and ask "Why is this decision the best one?"

There are several steps which should help

accomplish the goal of integrating emotions and lead to dispelling the myth that emotions are bad. First, the physician needs to be aware of his or her emotions. This self-awareness will not only lead to the early recognition of ethical problems, but it will strengthen the relationship as the physician helps the patient recognize and vent his or her feelings.⁸ Second, the physician should understand the features of empathy and work toward a therapeutic relationship. Third, the physician should try to blend emotions and reason into the process of ethical decisionmaking.⁹

SUMMARY

Emotions play a central role in our daily lives. They influence our behavior as well as the development and direction of our relationships. Clinically, emotions may signal the presence of ethical conflicts between patients, physicians, and others involved in the patients' care. Emotions need to be recognized as physicians work toward empathic interactions, while both reason and emotion need to be integrated into the process of ethical decision making to ensure balanced outcomes.

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SCMA

NEWSLETTER

DECEMBER 1990

HIGHLIGHTS OF THE NOVEMBER 15 BOARD OF TRUSTEES MEETING

The Board of Trustees approved the charge of the newly formed Environmental Protection Committee chaired by Edward W. Catalano, MD. The charge is as follows: to (1) encourage physicians to be spokespersons for environmental stewardship; (2) encourage the medical community to cooperate in reducing or recycling waste; (3) encourage physicians and the rest of the medical community to dispose of its medical waste in a safe and properly prescribed manner; (4) enhance the role of physicians and other scientists in environmental education; (5) endorse legislation such as the National Environmental Education Act to increase public understanding of environmental degradation and its prevention; and (6) encourage research efforts at ascertaining the physiological and psychological effects of abrupt as well as chronic environmental changes. Questions or suggestions about the committee should be directed to Steve Williams at SCMA Headquarters.

MEDICARE UPDATE

Information for Nonparticipating Physicians

In order to provide you better service, Medicare will give nonparticipating physicians or their staff information on claim status and date of resolution. Medicare cannot provide you with the amount paid due to provisions in the Privacy Act.

Please recall that the charges of nonparticipating physicians will be limited to the lesser of the 1990 MAAC or 125 percent of the nonparticipating prevailing rate (140 percent for evaluation and management).

This fact is important to consider when making your participating/nonparticipating decision for 1991.

By the time you receive this newsletter, Blue Cross and Blue Shield of SC will have held regional Medicare workshops and more specific information will be available. Please call Medicare (754-1968, in Columbia) or Barbara Whittaker or Cindy Osborn at the SCMA for further information.

DOCTOR OF THE DAY PROGRAM

If you are interested in serving as a volunteer in the "Doctor of the Day Program" at the State House, please contact Jan McKellar or Barbara Garvin at SCMA Headquarters.

FROM THE OFFICE OF COOPERATIVE HEALTH STATISTICS

The SC Ambulatory Medical Care Survey, modeled after the National Ambulatory Medical Care Survey, is being implemented in order to gather and disseminate statistical information regarding medical care provided by physicians to residents of SC. Approximately 550 physicians will be randomly selected to participate in the survey which involves the collaborative efforts of the SCMA, SC State Board of Medical Examiners, the medical schools, specialty societies and the Office of Cooperative Health Statistics. Selected physicians will be asked to complete a brief form for each patient visit in their offices during a one-week period. The forms can be completed in minimal time by office assistants, with very little, if any, of the physician's time required.

Names and practices will be maintained in strict confidence with only grouped data used in statistical reports. Analyses will include reasons for visits; visit rates by age, race and sex; diagnostic services; therapeutic services; and payment mechanisms. The survey provides the only mechanism to obtain this information which should be a valuable resource for office management in the private clinic, as well as statewide planning. The participating physician will receive a summary report comparing his/her practice with an average practice profile, obtained by grouping all physicians in the same specialty, before any publication of the results. The value of the data and success of the survey are totally dependent on physician participation; therefore, each selected physician is urged to participate.

IMPROVED COLLECTION PRACTICES IN THE HEALTH CARE OFFICE

I. C. System, in association with the SCMA, will hold a one-day collections seminar in Columbia on February 21, 1991. This full day collection seminar is a must for anyone new to collection work. It covers the basics, including the overall collection process, establishing collection policy, collecting by letter and phone, an introduction to collection law and the alternatives for enforcement. Others who can benefit by attending include the longer term employee who wants a refresher course in the basics, and doctors who have decided "too much is enough," and are ready to take action on past-due accounts. A complete collections manual and lunch will be provided. Cost will be \$100 for SCMA members or their staff (\$150 for non-SCMA members).

If you or your staff would be interested in attending such a seminar, please call Julia Brennan at the SCMA in Columbia by January 1, 1991.

FEBRUARY IS TEEN PREGNANCY PREVENTION AWARENESS MONTH

The Greater Columbia Teenage Pregnancy Prevention Council is planning several events to focus public attention on teenage pregnancy prevention during the month of February, 1991. What was originally a local project has now grown into a statewide initiative. Watch for more details.

Meantime, a new poster on teenage pregnancy is available at no cost to you for your use in your office and for distribution to schools, clinics and wherever teens gather. There are 25 posters in each packet.

Address your order to the American College of Obstetricians and Gynecologists, Office of Public Information, 409 12th Street SW, Washington, DC 20024 or call (202) 484-3321.

SC SPECIAL OLYMPICS NEEDS MEDICAL ASSISTANCE

SC Special Olympics has asked for physicians to lend their time and effort to the program by assisting with medical examinations. Effective July 1, 1990, the SCSO Board of Directors established a policy that each athlete who participates in SCSO needs to have a medical release completed or signed off by a physician. Beginning this year, the medicals will be good for two years. The one-page document can be filled out after a general checkup on the athletes who are ages eight and up. If the athlete has Down Syndrome, a full radiological exam will be required.

If you will donate your time and complete these special examination forms after a general checkup on SCSO children, please contact SCSO at 1-800-765-7276.

CME ACCREDITATION

Charter Hospital of Greenville and Spartanburg Regional Medical Center have recently been surveyed by the SCMA CME Committee. Charter was awarded two year's accreditation and SRMC was awarded four years' accreditation as accredited sponsors of continuing medical education for physicians. SCMA accreditation seeks to assure both physicians and the public that the CME activities sponsored by these institutions meet the high standards of the Essentials for Accreditation of Sponsors of Continuing Medical Education as specified by the ACCME and the SCMA.

If you are interested in accreditation of the CME activities of your hospital, please contact Joy Drennen at SCMA Headquarters for additional information and application form.

TERATOGEN INFORMATION SYSTEM

During January, 1991, the University Affiliated Programs, Department of Pediatrics, will implement a toll-free Teratogen

Information System for health professionals treating pregnant women. The system will provide a written summary of the latest research about the teratogenic effects of specific drugs, chemicals and medicals. This service is made possible through a grant from the Developmental Disabilities Council, Office of the Governor. The toll-free number will be 1-800-922-1107; in Columbia, 777-5732. Questions prior to the implementation date should be directed to Ms. Marilyn Moody at 737-6559.

CAPSULES

SCMA resident members Dan W. Robinson, Jr., MD, and Enoch G. Ulmer, MD, are recipients of AMA/Burroughs Wellcome Company Leadership Scholarships for their participation in community service projects.

Charleston neurologist Braxton B. Wannamaker, MD, has been elected president of the American Epilepsy Society.

UPCOMING MEETINGS/CONFERENCES

The Southern Medical Association is sponsoring a program entitled "How to Get Started in Medical Practice" on January 26-27, 1991, at the Omni Hotel in Charleston. The fee is \$150 for residents, \$175 for SMA members and \$200 for SMA non-members. For further information, contact LaDonna Nail at the Southern Medical Association at 1-800-423-4992.

WATCH FOR PREREGISTRATION FORMS FOR THE 143RD SCMA ANNUAL MEETING AND SCIENTIFIC ASSEMBLY: The 143rd SCMA Annual Meeting and Scientific Assembly will be held again in Charleston at the Omni Hotel, April 24-28, 1991. Mark your calendars now. Preregistration materials, including a tentative schedule of events and hotel registration forms, will be mailed in early 1991 to all SC physicians.

SCMA NEWSLETTER
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LIVING ETHICS: HOMEOSTASIS AND ETHICAL PRINCIPLE

C.D. BESSINGER, JR., M.D.*

The Eighties were something of an ethics decade. Much was said and written about the many ethical issues facing the modern physician, and about how the various competing theories and principles of ethics might apply to many complex dilemmas. Yet there seems to have been little movement toward a unifying theory which we as clinicians might use to determine "right action" in new situations at the bedside.

Clinicians still sometimes consider that philosophers devise theory in isolation. The world of the "should be" often seems in conflict with the clinician's imperative to prescribe for the patient in full recognition of the world as it is. That may result in unnecessary intellectual tension between philosophy and medicine. For example, Wallace has commented that there has been a "philosophobia" in medicine and a matching blindness of philosophy toward medicine.¹

Further, public debate on issues in bioethics is often polarized between absolutist and situationalist positions. If moral argument is couched in absolutist terms, it is not adequate to deal with the multi-level variabilities found in clinical situations and in biological systems generally. Yet argument that does not offer a high degree of "moral certainty" offers little guidance in the day-to-day exigencies of clinical practice, particularly in a litigious practice environment. Reconciling the separate languages and perspectives of philosophy and of pathophysiology remains a key problem for clinicians concerned about ethics, and we still seek a unifying theory of medical ethics that is satisfactory both clinically and philosophically.

In previous work,^{2,3} I have pointed to Schweitzer's formulation of reverence (respect) for life as a clinically applicable principle which can harmonize divergent philosophical points of view, and which

speaks to the complexities of modern clinical situations. Yet in today's discourse, whether in the public square or the public hospital, understanding of Schweitzer's ideas may be impaired by the religious connotations of *reverence* and by confusion with "right to life" absolutism. Many of these problems can be overcome by expressing ethics in the language of life-systems theory.

PRINCIPLE AND THEORY

In practice, we seek to define actions according to ethical principles. There is a broad consensus among ethicists that among the most important principles of medical ethics are autonomy, no-harm, benefit, and justice. All of these represent goods to be served in our conscious actions. But what more basic principle leads us to these?

What elemental principle guides us when these four derivative principles are in conflict? For example, what determines the balance between risk of great harm and the desire to achieve benefit? What determines how justice in society is reconciled with the autonomous needs of individual patients? If we are to find clinically satisfactory answers to such basic questions, ethical theory must extend beyond the confines of a narrowly defined "pure" philosophy to include the biological, and even psychological, dimensions of ethical theory.

Early in this century, G. E. Moore⁴ pointed to the pitfall, or "naturalistic fallacy," of defining some characteristic as good merely because it is "natural." Accordingly, there is a prevalent view in ethics today, expressed by Thomas Nagel,⁵ that ethics is a "theoretical inquiry that can be approached by rational methods, and that has internal standards of justification and criticism." He calls for an "ethics without biology."

This traditional approach of "pure" philosophy seeks resolution of questions by "pure reason." In terms of Freud's model of

*10 Enterprise Blvd., #107, Greenville, S. C. 29615.

the psyche, ethics is an *ego* activity, for the processes of reason are processes of consciousness. Reason seeks to insulate its processing of the observed (objective) phenomena of the material world from the subjective unconscious instinctual world, and particularly from the “spiritual” content of the unconscious psyche.

However, the ego (individually and collectively) is often capricious. In defining its own good, it usually seeks to serve its own purposes. If ethics is to operate entirely at the ego level, the ego is placed in an inherent conflict of interest, writing the rules by which it audits its own ethical accounts. Without some standard of moral reference external to “on-line” consciousness, we are left with ethical ambivalences with respect both to theory and to individual actions.

If we are to overcome this difficulty, we must take a new look at “ethics with biology.” Physician Bernard Towers writes that the proper mode is not first to establish ethical theory which is then to be applied to the theory and practice of science and medicine; rather:

Just as Aristotle’s physics necessarily antedated and was logically prior to his meta-physics, so must modern science (and in particular the science of biological evolution) lay the groundwork for, and establish the mode of, modern ethics.⁶

SYSTEMS ETHICS

As I have previously argued,⁷ the proper “philosophic milieu” for clinical practice is the modern life systems world-view.⁸ The dominant characteristic of life systems is flux equilibrium, which, at the level of the individual organism was named by Cannon as *homeostasis*.⁹ For the organism, or for a whole system of organisms, survival requires the capacity to maintain a dynamic stability, on which depends the ability to heal wounds and to adapt to environmental stresses.

Thus, nature has defined the Good as that well-tuned condition of least strain, in which the system as a whole (or the reference sub-system that is the object of ethical concern) survives and seeks to actualize its potential for development as a whole. The Good is

homeostasis, a term which we may apply both to the flux equilibrium and to the processes by which it is achieved. Such a model requires that one look beyond the reference sub-system to consider effects at levels “above” and “below” it. It is in this homeostatic *summum bonum* that we may find the external standard by which to judge our actions in complex life situations.

A systems model of ethics changes somewhat the traditional model of good polarized against evil, and of specific actions as always ethical or always evil. Here, the ethical action is that which tends to restore the self-regulating balance of (and thus benefit) the relevant sub-system(s). When the same action persists beyond sufficiency and thus tends to destabilize (to harm), it becomes unethical (evil). When a proposed action confers no benefit, the ethical act is to refrain from acting.

Schweitzer’s formulation of reverence for life¹⁰ is the life-systems ethic, based on awareness of, respect for, and support of all life’s *will-to-live*. Writing six years before Cannon “named” homeostasis, Schweitzer used a nineteenth century term that may now sound archaic. Yet it is clear that he was entirely conscious of the interactive, interdependent nature of life, and of its inner dynamic for survival.

METAETHICAL CONSIDERATIONS

If life is viewed as an integrated, interactive whole, all forms of life have value. Each form of life “values” itself, in that its own processes seek its survival and development, and it must do so at some expense to other life. While there is a hierarchy of relationships to be served and conserved (individual, family, society, species), general life-systems theory does not offer a scale of values for choosing one form of life over another, or one individual over another.

If we are to direct our choices properly and provide structure for the solving of poorly structured problems, we must impose another level of ethical consideration—a metaethical level—which seeks to discern the various values operative in the life system.

Some of these operative values are inferred from the autonomic operation of life-

systems across many species: certain needs which must be met, freedom for development, and diversity through individuality for maximization of adaptive options. Respect for life implies respect for these values, and for the limits imposed on individual life by the life process itself.

Other operative values are unique to the human level of conscious action. While one must consider the multi-level ("global") implications of one's efforts, insuring that an action is ethical requires focus on the immediate ("local") object of concern. It is only there that an action can be judged to be both effective and sufficient to its Good: homeostasis. The local subsystem (e.g., patient) interests may not be subjugated to those of the global system (e.g., societal) interests, for to do so would make the system tend toward becoming self-consuming and destabilized. Such action would thus be anti-ethical.

Life-systems ethics, as does quantum physics, carries its own uncertainty principle: As a part of the complex and variable life system, we may not be certain of the outcome of a chosen action, or of the particular rule to apply. We must, however, act to maximize the probability of an ethical outcome, and to conserve individual responsibility and thought.

PHYSICIANS AND LIFE PROCESS

Clinical ethics must arise from a clinical attitude that respects not only a patient's signs of life, but all levels of the patient's biopsychosocial milieu¹ and the larger society. To understand ethics, we must move beyond a concept of life as product (that is, as individual persons or discrete organisms) to a concept of life as process.

Life, as process, has needs which must be met. Life conserves individuality and celebrates diversity. It is inter-active and inter-dependent. It acts on many levels simultaneously. Yet, life has its limits. Individuals do not live forever, and medical skill is not infinite.

Life systems are too complex to be completely controlled by medical skill. In the final analysis, it is homeostasis which does the regulating. The physician can only tilt the balance toward homeostasis and let the life process itself do the fine-tuning. Yet this is

not an argument for non-intervention, only a call for recognition of human limits. Indeed, the model emphasizes the imperative for ethical intervention, to avoid the harms at each level (patient, family, physician, society) when disease, pain and suffering are not appropriately addressed.

The question raised by some of "When does life begin?" is not especially pertinent to medical ethics, for life is a continuum. It began a very long time ago. Life is the given by which, and in which, we all function. Thus, while we direct our skills toward sustaining life, it is inappropriate to consider our skills as "life-giving." It is also inappropriate, even arrogant, to say that we have taken life when we merely withdraw or withhold treatments which will not help life's balance.

CLINICAL AND POLICY IMPLICATIONS

Medicine began, and in many situations continues, its technologic era under a clinical and legal presumption that we should seek to preserve individual metabolic activity at all costs and in spite of all odds. All too frequently, the physician's legal duty seems to be defined by doing the usual and customary treatments for the diagnosis at hand. However, the life-process considerations mentioned above impose a different perspective.

An exhaustive inquiry into clinical applications of systems ethical theory is well beyond the scope of one essay. It is appropriate, however, to consider as a brief example how systems thinking applies to the celebrated Cruzan case¹² in which a young woman remains in a persistent vegetative state seven years following an automobile accident. The Missouri Supreme Court had denied her parents' request to permit discontinuance of her tube feedings; the U. S. Supreme Court held the Missouri action to be constitutional.

For the patient in coma, clinical efforts must focus on assisting the restoration of homeostasis so long as there is a prospect of doing so, for we seek to conserve and support, and if possible restore, the individuality of the patient. We seek to recognize and preserve autonomy, to respect the patient as a whole organism, and to assist restoration of

whole function. Such an attitude and objective express the concern of the social system for its individual members, as well as the individual physician's commitment to each patient.

Yet, when we have no further prospect of restoring the homeostasis of the patient as a system, attention must turn to a recognition of life's limits and of medicine's limits, and to concerns about the homeostasis of the larger biopsychosocial system of which the patient, family and clinicians are a part. Since the patient is a part of a family system, family judgment must substitute for the judgment of a patient who is comatose. Since family is a level of system whose healing and homeostasis are also at stake, family must be involved in decisions to terminate treatment.

From such a perspective, one respects life more, not less, by "letting the patient go" with dignity. These arguments do not hinge on a concept of a "right to die," but on the efficacy of efforts to support a patient's own autonomous homeostasis. When we have done all that we know to do and that is not enough, we are justified in acknowledging and accepting life's limitations. Had the state and federal justices based their decisions on systems ethics and reverence for life, the outcome of Cruzan would undoubtedly have been different.

Would we not in a hopeless case serve the larger life system better by accelerating the process of death, especially when a patient's organs are suitable for transplantation? No, for being *beyond benefit* of specific medical therapies is not tantamount to being *beyond harm*. "Active" euthanasia¹³ obviously harms the unconscious homeostatic "autonomy" of the patient as an organism. Giving societal interests precedence over individual ones also harms society's equilibrium, as noted above. Further, physicians who act contrary to individual life-interests foster distrust of physicians generally, and thus tend to destabilize the medical-social subsystem.

Is the life system better served by arbitrary standards for terminating treatment, such as age?¹⁴ At the human societal level, diversity derived from individuality serves species adaptation, and the social balance de-

rives benefit from respecting all individuals, irrespective of arbitrary categories, even if their contribution is only potential or is unrecognized by the majority. However, in the face of scarce resources, societal balance could be served by limiting treatments to those which have been clearly shown to provide benefit to similar patients.

DISCUSSION

A life-systems ethic based on the good of homeostasis gives rise to a key question: Homeostatic processes can find several states of equilibrium, especially in the face of disease; which state are we obligated to serve? At the human level, the highest good is that state of equilibrium which the self-regulating organism will autonomically attain in its own biopsychosocial milieu, given the freedom and opportunity to do so. Acting ethically consists in supporting that process insofar as knowledge, skill, and resources permit, and insofar as harm to other individuals (and other levels of the system) can be avoided.

Adopting a life-systems perspective and an ethics based on the Good of systems homeostasis opens up new levels of analysis and argument as we deal with the complex questions facing the medical community today. An ethics based on our science of life systems is satisfactory philosophically in that it corresponds to our understanding of biological "truth," and clinically in that it is understandable and communicable in physiological terms.

Because of the complexity of the problems which confront us, we may not expect immediate, easy, or automatic answers to our clinical dilemmas. Applying theory to practice will remain a continuous, rigorous, and often tedious intellectual process of balancing knowledge and reason in an attitude of compassion.

In acknowledging reverence for life as the natural ethic, we do not find a sentimental and detached contemplation of life. We find instead a basis for an intellectually rigorous theory of ethics, for reverence for life requires us to know what we are doing, and to do in accordance with what we know.

This systems ethic seeks a humane bal-

ance between clinical science and clinical art. It requires us always to seek to serve our patients with respect, and in so doing, can help us give medicine a human face that truly reflects its human heart. That is our ethical challenge, and our hope.

SUMMARY

Adopting a life-systems perspective and an ethics based on the Good of systems homeostasis opens up new levels of analysis and argument as we deal with the complex questions facing the medical community today. An ethics based on our science of life systems is satisfactory philosophically in that it corresponds to our understanding of biological "truth" and clinically in that it is understandable and communicable in physiological terms. □

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ACKNOWLEDGEMENTS

The author appreciates the critiques of an earlier version of this work by Nora K. Bell, Ph.D., and Douglas M. McDonald, Ph.D.

Editorials

MEDICAL ETHICS: A PROMISE FULFILLED

To every thing there is a season, and a time to every purpose under the heaven: A time to be born and a time to die. . . . A time to weep, and a time to laugh, a time to mourn, and a time to dance. . . .

Ecclesiastes 3: 1-4

The holiday season is a time to celebrate, and this year we should celebrate not only progress in medical science but also in medical ethics. Looking back, the story has unfolded to a large extent in successive volumes of *The Journal of the South Carolina Medical Association*.

Back in 1909, Dr. J. C. Duckworth of Anderson wrote in these pages that "on the subject of medical ethics, so much might be said, and so little known, that a whole course of lectures is needed.¹ In 1972, Dr. Joseph. I. Waring of Charleston confided that he could find little or nothing about medical ethics when asked to speak on the topic. Dr. Waring noted: "It may be that some of our members are not on speaking terms with the principles which are supposed to guide their professional lives."²

Then, in 1978, Dr. John P. Dolan informed us of a raging debate between physicians and professional ethicists.³ Medical ethics was alive and bustling but was riddled with turf quarrels. Yet by 1987, when Dr. Charles Duncan announced that establishing an ethics committee would be a top priority of his term as SCMA president, the smoke had largely cleared. Charlie had the prescience to appoint both physicians and professional philosophers to the new committee. It worked.

Two papers in this issue of *The Journal* illustrate the healthy status of medical ethics as a discipline, as an SCMA activity, and as a practical guide to decision-making. The paper by Dr. Julia E. Connelly, delivered as the Leonard Douglas Memorial Lecture at our annual meeting, explores the value of emotions. The paper by Dr. C. D. Bessinger, a se-

quel to his papers on reverence for life, explores the value of Good of systems homeostasis. Publishing these two fine papers in the same issue brings me great pleasure. Readers, have fun!

The careful reader will note that both authors allude to the four cornerstones of today's medical ethics: autonomy, beneficence, nonmaleficence, and justice (Table 1). Using these principles is somewhat like playing a musical scale; built-in conflicts demand careful orchestration. Drs. Connelly and Bessinger chose different keynotes by which to help us make the most harmonious choices for our patients.

Dr. Connelly reassures us that its okay to listen to our emotions. Hers is a rebuttal to those who would have clinicians behave "as rationally as possible" like the character Spock in "Star Trek." Our own emotions deserve a place in the data base. If a decision doesn't feel right, it probably isn't. True, emotions must be tempered by reason; but true, also, that emotions are nonetheless invaluable. In a sense, they are our vital signs.

Dr. Bessinger's paper extends the usefulness of his previous comments on reverence for life, as put forth by Albert Schweitzer. It was 75 years ago this September that Schweitzer conceived this concept while contemplating the deficiency of 20th Century worldviews from the deck of a barge:

Late on the third day, at the very moment when, at sunset we were making our way through a herd of hippopotamuses, there flashed upon my mind, unforeseen and unsought, the phrase, "Reverence for Life." The iron door had yielded: the path

TABLE 1. FOUR PRINCIPLES OF BIOMEDICAL ETHICS

PRINCIPLE	DEFINITION AND IMPLICATIONS
Autonomy	<p>Individuals must be treated as autonomous agents entitled to make choices with respect to their own destinies.</p> <p>From this principle, it follows that individuals have the right to make informed consent and the right to privacy.</p>
Beneficence	<p>Actions should promote the interests and well-being of others; they should do good.</p> <p>From this principle, it follows that we must choose courses of action with the highest possible ratios of potential benefits to potential risks.</p>
Nonmaleficence	<p>Actions should not harm others: <i>primum non nocere</i>.</p> <p>From this principle, it follows that we must not choose courses of action which may be harmful to others.</p>
Justice	<p>Actions must be fair to all concerned.</p> <p>From this principle, it follows that we must not discriminate. Both the good and bad consequences of our actions must be distributed equitably.</p>

in the thicket had become visible. Now I found my way to the idea in which world- and life-affirmation and ethics were contained side by side.

While the concept might seem at first to be rather nebulous, Schweitzer saw it as a clear guide to ethical behavior:

A man is ethical only when life, as such, is sacred to him, that of plants and animals as that of his fellowmen, and when he devotes himself helpfully to all life that is in need of help. Only the universal ethic of the feeling of responsibility in an ever-widening sphere of that life—only that ethic can be founded in thought. The ethic of the relation of man to man is not something apart by itself: it is only a particular relation which results from the universal one.⁴

Schweitzer made these observations many

decades before ecologists began to proclaim the same idea, sometimes called *moral pluralism*—the idea that ethics must take into account that our actions impact not just on humans but also on the entire ecosystem.⁵ Life is rare and sacred and therefore should be our top priority.

I interpret Dr. Bessinger's paper as an attempt to provide normative standards in a world grown bereft of normative standards. The use of different, competing categories of standards (Table 2) contributes to the interminable nature of many ethics dialogues. Much of contemporary ethics revolves around situational standards rather than around this or that transcendent "ought." Yet without a transcendent "ought," who is to say what is right?

In his new essay, Dr. Bessinger notes that "reverence for life" may be unpalatable to many persons in a world grown increasingly secular. Noting that Schweitzer wrote six

TABLE 2. THREE CATEGORIES OF ETHICAL STANDARDS

CATEGORY	BASIS	STRENGTHS	WEAKNESSES
Normative	Transcendent "ought"	Goal; clear criterion of right and wrong	How are norms derived? Insensitivity to particular situations
Consequentialist			
A) Situational	Each situation provides its own "ought"	Sensitivity to unique circumstances	Why are certain outcomes and rules preferred? How is "good" defined?
B) Utilitarian	Greatest good for the greatest number	Sensitivity to the broad or global picture	Why should collective values dominate the individual? How are results measured?
Existentialist	Autonomous fulfillment of personal goals and values	Maximizes personal freedom	Why should individual values dominate the collective? How can one universalize the goals and values?

years before the physiologist Walter Cannon coined the term "homeostasis," Dr. Bessinger substitutes "Good of systems homeostasis" as more widely-acceptable terminology. To those who might protest that this is but old wine in a new bottle, I would reply that Dr. Bessinger's vintage continues to age quite

nicely. With increasing clarity, he urges us to promote life in its broadest sense. Old Qoheleth (*supra*) knew it well: there is "a time to be born and a time to die"

Let's not stop here. Dr. Connelly observes that when she was invited to give the Leonard Douglas Memorial lecture, "The possible

choices for such a lecture were unlimited.” What about ethical issues raised by the other two papers in this issue of *The Journal*?

Drs. Adams and Greene discuss laparoscopic cholecystectomy, an approach destined to spare untold thousands those tell-tale scars over the right upper quadrant of the abdomen. They note candidly that operating through a peephole raises the likelihood of injuring the extrahepatic bile ducts. And they note that demand for the new procedure will be to a large extent marketdriven. They go on to tell us that “it is when the surgeon perceives that he or she has an ‘easy’ cholecystectomy that the situation leading to a higher incidence of ductal injury occurs.” Enter the ethics of everyday life. How can we always be sure that we are acting in the patient’s best interests rather than our own?

Finally, the paper by Dr. David Marsh and his colleagues on extracorporeal membrane oxygenation in the neonate reminds us of the ethical whirlwinds surrounding today’s neonatal intensive care units. What are the long term risks of ligation of the common carotid artery and internal jugular vein? Is such aggressive, technology-driven care the best allocation of resources—or should we

shift some of the monies into prevention? Enter the ethics of heroic remedies. How can we always be sure that we are acting in society’s best interests, and not just the medical profession’s?

In this year’s presidential address, Dr. John Simmons reminded us that while none of us know exactly how medicine will change before the year 2000, all of us know that it *will* change. If we have our share of problems, we also have much for which to be grateful. Thanks, Charlie Duncan; thanks, members of the SCMA ethics committee; and thanks authors, for your fine contributions. A time to celebrate . . . and a time to be proud.

—CSB

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SORRY, GAVIN

Rebuke a wise man, and he will love thee.

—Proverbs 9:8

While making no claims to wisdom, I thank those who informed me gently that the bard whom Gavin Appleby quoted in his last editorial was not Shakespeare but rather Omar Khayyam.¹ Here’s the context, from *The Rubaiyat*:

The moving Finger writes; and having writ,
Moves on, nor all thy Piety nor wit

Shall lure it back to cancel half a line,
Nor all thy Tears wash out a word of it.

Sorry, Gavin.

—CSB

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THANKS, ART

Returning a telephone call, I received a shocker: Dr. Arthur F. DiSalvo, director of DHEC's Bureau of Laboratories for more than 30 years, is leaving South Carolina to assume a similar post in Nevada. It's just beginning to sink in—we're about to lose a state treasure.

An internationally-known mycologist, Art brought recognition to South Carolina by making our laboratory among the nation's most progressive—despite budgetary constraints. He oversaw the processing of untold thousands of specimens, yet never lost that ability to become excited by a single case. He

brought energy and enthusiasm to everything he touched. We were fortunate that he chose to participate to the fullest in organized medicine.

Despite his busy schedule of state, national, and international meetings, Art made time to attend both his county and state medical society meetings on a regular basis. He was always there, always contributing. He has been a valuable member of our Editorial Board, full of suggestions, including a special DHEC issue to appear in early 1991. Art, to say I'll miss you on the masthead of *The Journal* is the understatement of the new decade.

But thanks for everything!

—CSB



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Letter to the Editor

To the Editor:

This letter is to remind physicians that penicillin is no longer recommended for treatment of gonorrhea.^{1,2} The proportion of gonococcal isolates that are resistant to penicillin has soared in the United States in the past several years.^{3,4} In 1989, in South Carolina, up to 15% of isolates were resistant to penicillin in some populations. As a result of this high level of resistance to penicillin, the United States Centers for Disease Control recommends ceftriaxone for treatment of gonococcal infection.¹

Spectinomycin should be used for persons who cannot take ceftriaxone. Either drug should be followed by doxycycline or erythromycin for presumptive treatment of chlamydial infection since chlamydia infection has been documented in up to 45% of cases of gonorrhea.¹

The South Carolina Department of Health and Environmental Control (DHEC), Bureau of Laboratories, is no longer testing gonococcal isolates for penicillin resistance, but will periodically monitor gonococcal isolates for the development of ceftriaxone resistance.

JEFFREY L. JONES, M.D.
Director, Disease Control and
Epidemiology

ARTHUR F. DiSALVO, M.D.
Chief, Bureau of Laboratories

HAROLD DOWDA, Ph.D.
Director, Diagnostic Microbiology

DEE BREEDEN, M.D.
Chief, Bureau of Preventive
Health Services

W. B. GAMBLE, JR., M.D.
State Epidemiologist
DHEC
2600 Bull Street
Columbia, S. C. 29201

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Editorial note:

Already, strains of gonococci with decreased susceptibilities to ceftriaxone are being described.¹

—CSB

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On the Cover:

LIONEL CHALMERS: 1715-1777

Lionel Chalmers, a young Scotsman who had received a liberal education probably at St. Andrews University, came to South Carolina around 1735 to begin the practice of physic. He met here a notable company of physicians already working in Charleston, i.e., James Kilpatrick, John Moultrie, John Lining, and Thomas Dale.

The newcomer must have made a good impression for he was soon in partnership with John Lining whose statistical and meteorological observations were already renowned. Chalmers soon began his own observations which would be the basis for his major work, *An Account of the Weather and Diseases of South Carolina*. This is a fascinating account—easily read, even in this day—which vividly describes fogs, hurricanes, thunderstorms, and summer's heat ("True indeed it is, that those who happened to sicken during these intensely hot months, might almost literally be said to have escaped through the fire when they recovered; which few in truth did.") and the "various diseases to which the inhabitants of that country are liable, in consequence of the changes which their constitutions undergo in the several seasons of the year."

Chalmers devoted a large part of this book to diseases of children, thus making his reputation as one of the earliest pediatricians. He published several other well received works, was a correspondent of Benjamin Rush, and was quoted many times with respect by William Cullen, one of the most famous of the Scottish teachers of the 18th century.

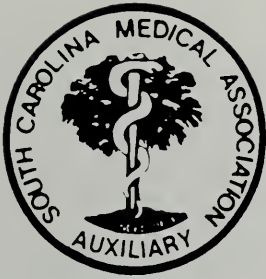


Lionel Chalmers died "in the 63rd year of his age, a sound judgement, and a benevolent heart, a most valuable member of the community. He never affected any mystery in his Practice [but] employed the knowledge he had acquired for the good of mankind and has left behind him the name of an affectionate husband and parent, a skilful, humane physician, and a worthy, honest man."

BETTY NEWSOM

The Waring Historical Library

This is the second in a series of *Journal* covers featuring title pages of significant works by South Carolinians. All books pictured are from the Waring Historical Library where your questions, comments, and visits are always welcome.



Auxiliary Page

SCMAA-SCIMER SCHOLARSHIPS 1990

Annually, the joint South Carolina Medical Association Auxiliary-SCIMER scholarships of \$800 each are given to worthy students at the Medical University of South Carolina and the University of South Carolina School of Medicine based on need and merit. This year, the Scholarship Committee evaluated 21 applications, all from worthy students. Five final recipients were selected from each medical school.

From the Medical University of South Carolina:

John Wade Strong, Marion, S. C.
Jennifer Dale Walker, Aiken, S. C.
Peter J. Neidenbach, Gainesville, Ga.
William M. Reeves, III, Summerville, S. C.
Tallulah L. Fellers, Camden, S. C.

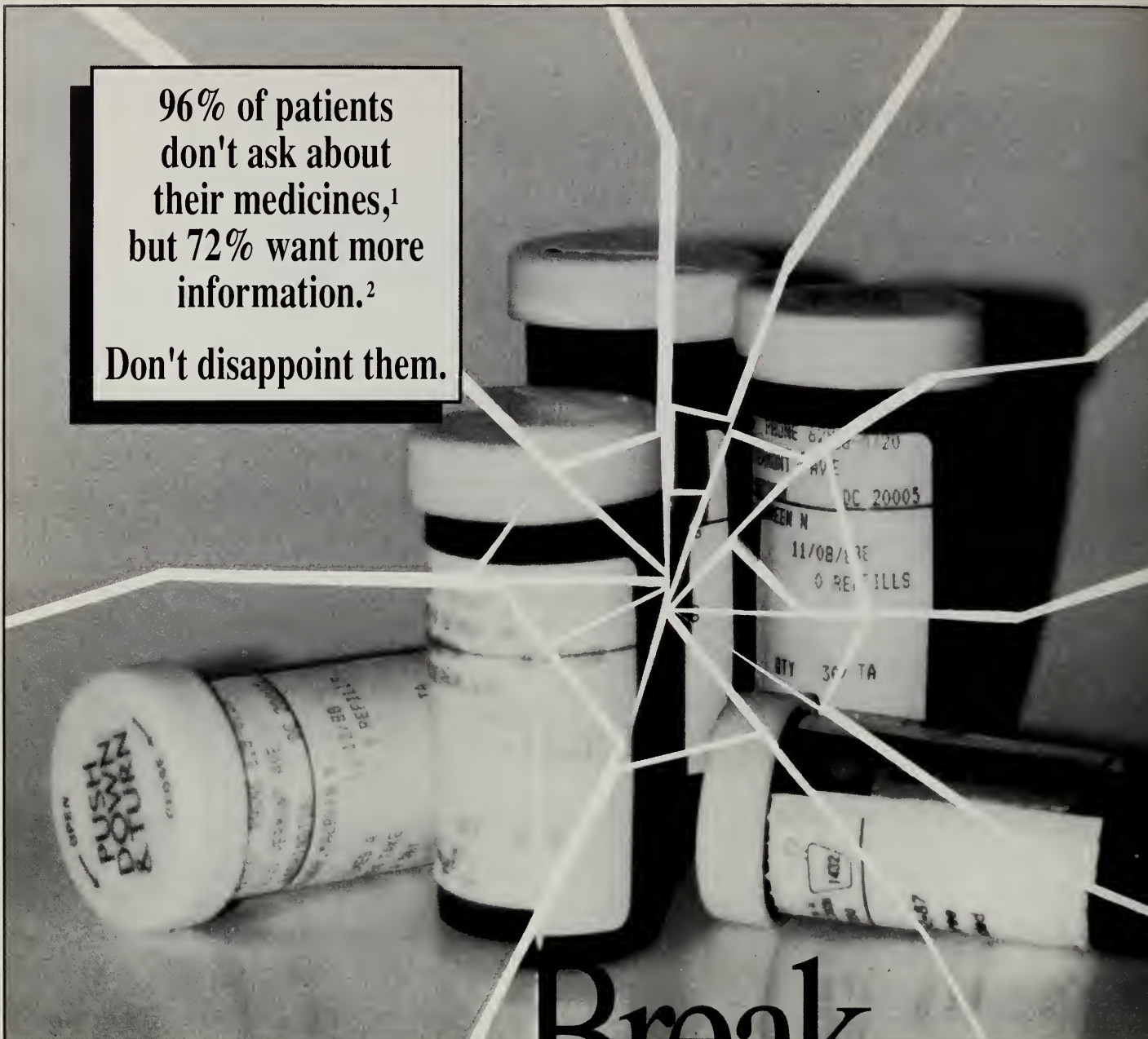
From the University of South Carolina School of Medicine:

Michael G. Avant, Florence, S. C.
Heather S. Gallman, Florence, S. C.
S. Wendell Holmes, Jr., Columbia, S. C.
Chris L. Kennedy, North Charleston, S. C.
James H. Parrott, Columbia, S. C.

The recipient of the SCIMER Stuckey Scholarship in the amount of \$2,500 was Aurelia Watson from Bamberg, S. C. Two SCIMER Cardiovascular Scholarships of \$1,000 for students from Spartanburg, Cherokee or Union Counties were awarded to Sam Ledford at USCSM and Jamie Rentz at MUSC. An additional SCIMER scholarship of \$1,000 from an anonymous donor was awarded to Ernest Gilmore at USCSM.

The awards were presented by Eloise Bradham, M.D., President of SCIMER, during the closing session of the SCMA House of Delegates at the Omni Hotel in Charleston on Sunday, April 29, 1990.

DEE FERGUSON (MRS. JAMES G.)
SCMAA Scholarship Chairman



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¹ FDA survey, "Patient Receipt of Rx Drug Information", 1983

² A Study of Attitudes, Concerns, and Information Needs for Rx Drugs
and Related Illnesses, CBS Television Network Consumer Model Survey, 1983

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